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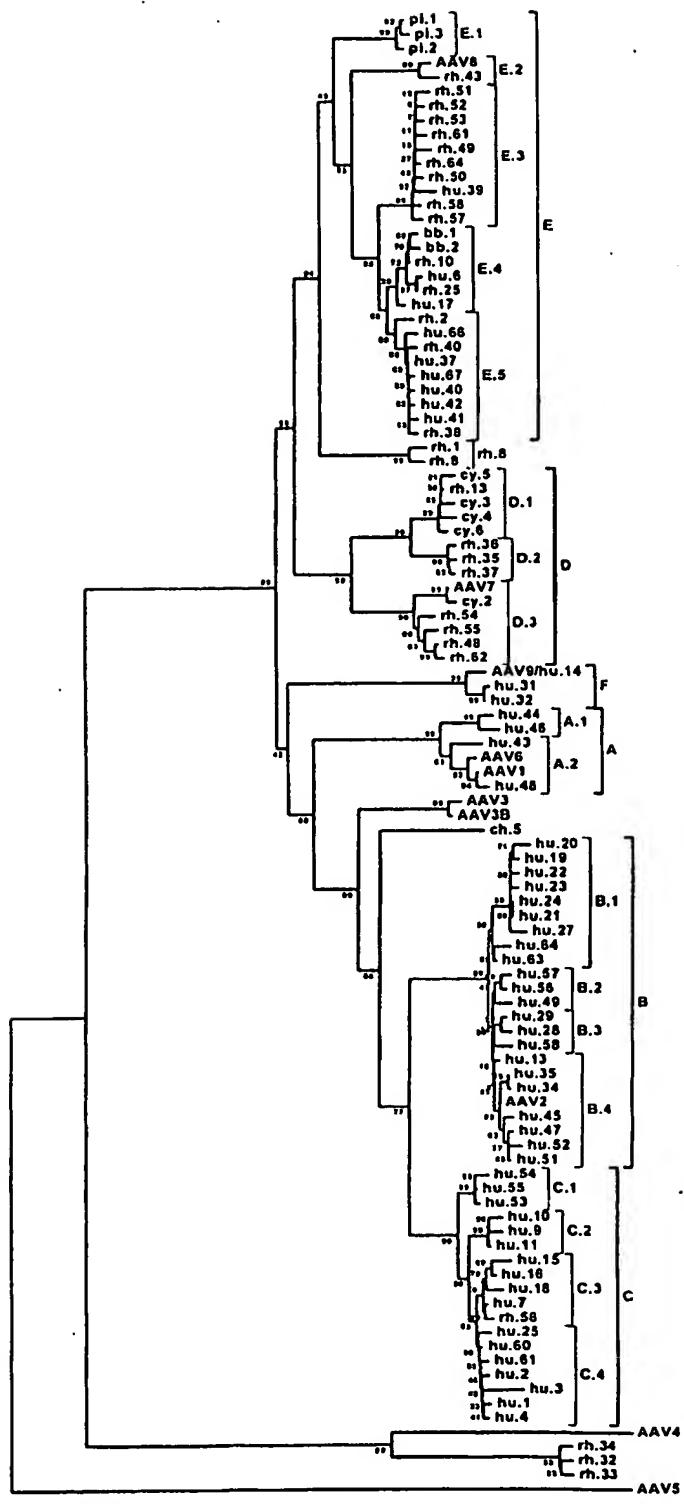


FIG. 1

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FIG. 2A

hu.27-B	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.21-B	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.22-B	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.23-B	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.7-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.61-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
rh.56-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.9-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHQDNSRGVLVLPGYKYLGPNSNGLDKGEPVNEADA
hu.54-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.53-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.60-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.55-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.2-C	1	MAADGYPPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.1-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.18-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.3-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.25-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.15-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.16-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHKDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.11-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHQDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.10-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHQDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
hu.4-C	1	MAADGYLPDWLEDTLSEGIRQWWKLKPQRSTUVWXYZKPAERHQDDSRGLVLPGYKYLGPENGLDKGEPVNEADA
rh.54-D	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA
rh.48-D	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA
rh.55-D	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA
rh.62-D	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA
AAV7-D	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA
rh.52-E	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA
rh.51-E	1	MVADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA
hu.39-E	1	MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDDGRRGLVLPGYKYLGPENGLDKGEPVNAADA

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FIG. 2C

hu. 48-A	71	AALEHDKAYDQQLKAGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEGAKTA
hu. 44-A	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEGAKTA
hu. 43-A	71	AALEHDKAYDQQLKAGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEGAKTA
AAV 6-A	71	AALEHDKAYDQQLKAGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEGAKTA
hu. 34-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 47-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 29-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 63-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 56-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 45-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 57-B	70	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 35-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 58-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 28-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLS-LVEEPVKTA
hu. 51-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 19-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 49-B	71	AALEYDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 52-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 13-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
AAV2-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 20-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 24-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 64-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 27-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 21-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 22-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 23-B	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 7-C	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
hu. 61-C	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA
rh. 56-C	71	AALEHDKAYDRQLDGDNPYLYKYNHADAEFQERLKEDETSFGGNLGRAVFOAKKRVLEPLG-LVEEPVKTA

hu. 9-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 54-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 53-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 60-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 55-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 2-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 1-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 18-C	71	AALEHDKAYDRQLESGDNPYLDGDNPKYNNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 3-C	71	AALEHDKAYDRQLESGDNPYLDGDNPKYNNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLRPLRKPVKTA
hu. 25-C	71	AALEHDKAYDRQLNSGDNPYLDGDNPKYNNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 15-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 16-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 11-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 10-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
hu. 4-C	71	AALEHDKAYDRQLDSDGNPVLKYNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEPVKTA
rh. 54-D	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEAAKTA
rh. 48-D	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEAAKTA
rh. 55-D	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 62-D	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LAEEAAKTA
AAV7-D	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 52-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 51-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 39-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 53-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
hu. 37-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 43-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 50-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 49-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
rh. 61-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-LVEEGAKTA
hu. 41-E	71	AALEHDKAYDQQLKAGDNPKYLYRNHADAEEFQERLKEDETSFGGNILGRAVEQAKKRVLEPLG-PVEEAAKTA

rh. 64-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 42-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
rh. 57-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 40-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
AAV8-E	71	AALEHDKAYDQQLQAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
rh. 58-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
rh. 40-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 67-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 17-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 6-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 66-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
rh. 38-E	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 32-F	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
AAV9/hu	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
hu. 31-F	71	AALEHDKAYDQQLKAGDNPyLRYNHADAEFQERLQEDTSFGGNLGRAVEQAKKRVLLEPLG-LVEEGAKTA				
			150	160	170	180
						190
						200
						210
AAV5	139	PTGKRIDDHFEP-----KRKKARTEEDSKPKSTSSDAEAGPSGSQQLQIPAPASSLGA DTMSAGG				
AAV3-3	140	PGKKRGPVQSPQ-EPDSSSGVGKSGKQPKRNLNFQQTGDSESVVPD-PQPLGEPPAAPTSLGSNTMASGG				
AAV4-4-	139	PGKKRPLIESPQ-QPDSSTGIGKKKGKOPAKKKLVFEDTGAGDGP-----PEGSTS GAMS-DDSEMRAAA				
AAV1-A	140	PGKKRGPVQSPQ-EPDSSSGIGKTGQQPAKKRNLNFQQTGDSESVVPD-PQPLGEPPA TAAVGPTTMASGG				
hu. 46-A	140	PGKKRGPVQSPQ-EPDSSPSGIGKTGQQPAKKRNLNFQQTGDSESVVPD-PQPLGEPPA TAAVGPTTMASGG				
hu. 48-A	140	PGKKRGPVQSPQ-EPDSSSGIGKTGQQPAKKRNLNFQQTGDSESVVPD-PQPLGEPPA TAAVGPTTMASGG				
hu. 44-A	140	PGKKRGPVQSPQ-GPDSSSGIGKTGQQPAKKRNLNFQQTGDSESVVPD-PQPLGEPPA TAAVGPTTMASGG				
hu. 43-A	140	PGKKRGPVQSPQ-SPDSSTGIGKKKGQOQPAKKRNLNFQQTGDSESVVPD-PQPLGEPPA TAAVGPTTMASGG				
AAV6-A	140	PGKKRGPVQSPQ-EPDSSSGIGKTGQQPAKKRNLNFQQTGDSESVVPD-PQPLGEPPA TAAVGPTTMASGG				
hu. 34-B	140	PGKKRGPVHSPV-EPDSSSGTGTGAGQOPARKRNLNFQQTGDSESVVPD-PQPLGQPPA APSGLGTNTMATGS				
hu. 47-B	140	PGKKRGPVHSPV-EPDSSSGTGTGAGQOPARKRNLNFQQTGDSESVVPD-PQPLGQPPA APSGLGTNTMATGS				
hu. 29-B	140	PGKKRGPVHSPA-EPDSSSGTGTGAGQOPARKRNLNFQQTGDSESVVPD-PQPLGQPPA APSGLGTNTMATGS				

hu. 63-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 56-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 45-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 57-B	139	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 35-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 58-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 28-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 51-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 19-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 49-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 52-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 13-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
AAV2-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 20-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 24-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 64-B	140	PGKKRPVEHSLA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 27-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 21-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 22-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 23-B	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 7-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 61-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
rh. 56-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 9-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 54-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 53-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLRQPPAAPSGLGTNTMATGS
hu. 60-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 55-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 2-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS
hu. 1-C	140	PGKKRPVEHSPA-EPDSSSSGTGKAGQQPARKRLLNFGQTGDADSVVPD-PQPLGQPPAAPSGLGTNTMATGS

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nu. 18-C	140	PGKKRPVEHSPV-EPDSSSSGTGKAGQQPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
hu. 3-C	141	PGKKRPVEHSPV-EPDSSSSGTGKAGQQPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
hu. 25-C	140	PGKKRPVEHSPA-EPDSSSGTGPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
hu. 15-C	140	PGKKRPVEHSPV-EPDSSSSGTGKAGNQPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
hu. 16-C	140	PGKKRPVEHSPV-EPDSSSSGTGKAGNQPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
hu. 11-C	140	PGKKRPVEHSPV-EPDSSSGTGPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
hu. 10-C	140	PGKKRPVEHSPV-EPDSSSSGTGKAGHQPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
hu. 4-C	140	PGKKRPVEHSPV-EPDSSSGTGPARKRLNFGQTGDADSVPD-PQLGQPPAAPSGLGSTMAAGS
rh. 54-D	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAGPSGLGSGTMAAGG
rh. 48-D	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAGPSGLGSGTMAAGG
rh. 55-D	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 62-D	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAGPSGLGSGTMAAGG
AAV7-D	140	PAKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPLGEPPAAPSVGSGTVAAGG
rh. 52-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 51-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
hu. 39-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGRTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 53-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
hu. 37-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 43-E	140	PGKKRPVEQSPQ-EPDSSSGTGPARKRLNFGQTGDSESVPD-PQPLGEPPAAPSVGSGTMAAGG
rh. 50-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
hu. 49-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 61-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
hu. 41-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 64-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
hu. 42-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 57-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
hu. 40-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
AAV8-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPLGEPPAAPSVGSGTMAAGG
rh. 58-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG
rh. 40-E	140	PGKKRPVEPSPQRSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVPD-PQPIGEPPAAPSVGSGTMAAGG

FIG. 2H

		220	230	240	250	260	270	280
hu. 67-E	140	PGKKRPVEPSPQRSPDSSTGIGKKQQPAKKRKLNEFGQTGDSESVVD-PQPIGEPPAGPSGLGSGTMAAGG						
hu. 17-E	140	PGKKRPVEPSPQRSPDSSTGIGKTGQOPAKKRKLNFQGTGDSESVVD-PQPIGEPPAGPSGLGSGTMAAGG						
hu. 6-E	140	PGKKRPVEPSPQRSPDSSTGIGKTGQOPAKKRKLNFQGTGDSESVVD-PQPIGEPPAGPSGLGSGTMAAGG						
hu. 66-E	140	PGKKRPVEPSPQRSPDSSTGIGKKQQPAKKRKLNFQGTGDSESVVD-PQPIGEPPAGPSGLGSGTMAAGG						
rh. 38-E	140	PGKKRPVEPSPQRSPDSSTGIGKKQQPAKKRKLNFQGTGDSESVVD-PQPIGEPPAGPSGLGSGTMAAGG						
hu. 32-F	140	PGKKRPVEQSPQ-EPDSSAGIGKSGSQPAKKKLNFQGTGDTESVVD-PQPIGEPPAAPSJVGSLTMASGG						
AAV9/hu	140	PGKKRPVEQSPQ-EPDSSAGIGKSGSQPAKKKLNFQGTGDTESVVD-PQPIGEPPAAPSJVGSLTMASGG						
hu. 31-F	140	PGKKRPVEQSPQ-EPDSSAGIGKSGSQPAKKKLNFQGTGDTESVVD-PQPIGEPPAAPSJVGSLTMASGG						
AAV5	198	GGPLGDDNNQGADGVGNASGDDWHDCDSTMGDRVVTKSRTTWLPSYNNHHQYREIKS-GSVVDGSNANAYFGY						
AAV3-3	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
AAV4-4-	202	GGAAVEGGQGADGVGNASGDDWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKRLG-----ESLQSNTYNGF						
AAV1-A-	208	GAPMADNNEGADGVGNASGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQISS-ASTGASNDNHYFGY						
hu. 46-A	208	GAPMADNNEGADGVGNASGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQISS-ASTGASNDNHYFGY						
hu. 48-A	208	GAPMADNNEGADGVGNASGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQISS-TSTGASNDNHYFGY						
hu. 44-A	208	GAPMADNNEGADGVGNASGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQISS-ASTGASNDNHYFGY						
hu. 43-A	209	GAPMADNNEGADGVGNASGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQISS-ASTGASNDNHYFGY						
AAV6-A	208	GAPMADNNEGADGVGNASGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQISS-ASTGASNDNHYFGY						
hu. 34-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 47-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDSHYFGY						
hu. 29-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 63-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 56-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 45-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 57-B	207	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 35-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 58-B	208	GAPMADNNDGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						
hu. 28-B	208	GAPMADNNEGADGVGNSSGNWHDQCDSTWMGDRVITTSRTTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY						

hu.51-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.19-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.49-B	208	GAPMADNNEGADGVGNSSGNRHCDSQWLGDRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.52-B	208	GAPMADNNEGADGVGNSSGNRHCDSQWLGDRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.13-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
AAV2-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.20-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.24-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.64-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.27-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.21-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.22-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.23-B	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTCNHLYKQIS--SQSGASNDNHYFGY
hu.7-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.61-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
rh.56-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.9-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGC
hu.54-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.53-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.60-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.55-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.2-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.1-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.18-C	208	GAPVADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGACNDNHYFGY
hu.3-C	209	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.25-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.15-C	208	GAPVADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.16-C	208	GAPVADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.11-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY
hu.10-C	208	GAPMADNNEGADGVGNSSGNWHCDSTWMGDRVITTRTWALPTYNHLYKQIS--SQSGASNDNHYFGY

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hu. 4-C	208	GAPMADNNNEGADGVGNSSGGNWHCDSDQWLGDRTVITTSRTWALPTTYNNHLYKQIS--SQSGASNDNHYFGY
rh. 54-D	209	GAPMADNNNEGADGVGNASGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISS-QSAGSTNDNHYFGY
rh. 48-D	209	GAPMADNNKGADGVGNASGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISS-QSAGSTNDNHYFGY
rh. 55-D	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISS-QSAGSTNDNHYFGY
rh. 62-D	209	GAPMADNNKGADGVGNASGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISS-QSAGSTNDNHYFGY
AAV7-D	209	GAPMADNNNEGADGVGNASGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISS-ETAGSTNDNTYFGY
rh. 52-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 51-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 39-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 53-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 37-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 43-E	208	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGATNDNTYFGY
rh. 50-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 49-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 61-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 41-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 64-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 42-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 57-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 40-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
AAV8-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 58-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 40-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 6-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 67-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
rh. 38-E	209	GAPMADNNNEGADGVGNSSGGNWHCDSTWLGDRTVITTSRTWALPTTYNNHLYKQISSNGTSGGSTDNDNTYFGY
hu. 32-F	208	GAPVADNNNEGADGVGNSSGGNWHCDSDQWLGDRTVITTSRTWALPTTYNNHLYKQISSNSTSGGSSNDNAYFGY
AAV9-hu	208	GAPVADNNNEGADGVGNSSGGNWHCDSDQWLGDRTVITTSRTWALPTTYNNHLYKQISSNSTSGGSSNDNAYFGY

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FIG. 2L

hu.24-B	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.64-B	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGSRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.27-B	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.21-B	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.22-B	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.23-B	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.7-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.61-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
rh.56-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.9-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.54-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.53-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.60-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.55-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.2-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.1-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.18-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.3-C	277	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.25-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.15-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.16-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.11-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.10-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
hu.4-C	276	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKRLSFKLNFKNLQVKEVTQNDGTTIANNLTTVQVF
rh.54-D	278	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKKLNEFKLNFKNLQVKEVTNDGVTTNDGVTTNDGV
rh.48-D	278	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKKLNEFKLNFKNLQVKEVTNDGVTTNDGVTTNDGV
rh.55-D	278	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKKLNEFKLNFKNLQVKEVTNDGVTTNDGVTTNDGV
rh.62-D	278	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKKLNEFKLNFKNLQVKEVTNDGVTTNDGVTTNDGV
AAV7-D	278	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKKLNEFKLNFKNLQVKEVTNDGVTTNDGVTTNDGV
rh.52-E	279	STPWGYFDFNRFHCHFSPRDWQRLINNNNWGFRPKKLNEFKLNFKNLQVKEVTNDGVTTNDGVTTNDGV

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rh.51-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.39-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.53-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.37-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.43-E	278	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.50-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.49-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.61-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.41-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.64-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.42-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.57-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.40-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD AAV8-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.58-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.40-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.67-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.17-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.6-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.66-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD rh.38-E	279	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.32-F	278	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD AAV9/hu	278	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD hu.31-F	278	STPWGYFDENRFHCHESPRDWQRLINNNNWGRPKRLSFKLFDNIQVKEVTQNEGKTIANNLTIQVFTD
AAV5	337	DDYQLPYVVGNGTEGCLPAFPQQVFTLPQYGYATLNRD-NTENPTERSFFFCLLEYFPSKMLRTGNNEFEFT	360	370	380	390	400	410	420																																							
AAV3-3	346	SEYQLPYVLGSAHQGGCLPPFPADVFMMVPQYGYLTNNNG---SQAVERSSFYCLEEPSQMLRTGNNEQFS																																														
AAV4-4-	337	SSYELPYVMDAGQEGLPPFPNDVEMMVPQYGYCGLVTGNTSQQTDRNAFYCLEEPSQMLRTGNNEFIT																																														

FIG. 2N

AAV1-A	347	SEYQLPYVLGSAHQGCLPPFPADVFEMIPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 46-A	347	SEYQLPYVLGSAHQGRLPPEPADVFEMIPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 48-A	347	SEYQLPYVLGSAHQGCLPPFPADVFEMIPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 44-A	347	SEYQLPYVLGSAHQGCLPPFPADVFEMIPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 43-A	348	SEYQLPYVLGSAHQGCLPPFPADVFEMIPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
AAV6-A	347	SEYQLPYVLGSAHQGCLPPFPADVFEMIPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 34-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNE---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 47-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 29-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 63-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 56-B	346	LEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 45-B	346	SGYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 57-B	345	LEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 35-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 58-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 28-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 51-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 19-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 49-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 52-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLSNG---SQAVERSSFYCPEYFPSQMLRTGNNETES
hu. 13-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
AAV2-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 20-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 24-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 64-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 27-B	346	SGYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 21-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 22-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 23-B	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES
hu. 7-C	346	SEYQLPYVLGSAHQGCLPPFPADVFEMVPOQYGYLTLNNG---SQAVERSSFYCLEYFPSQMLRTGNNETES

hu. 61-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
rh. 56-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 9-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 54-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 53-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 60-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 55-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 2-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 1-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 18-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 3-C	347	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 25-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 15-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 16-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 11-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
hu. 10-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNLTSFS
hu. 4-C	346	SEYQLPYVVLGSAHQGCLPPFPADVEMVPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEQFS
rh. 54-D	348	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNND---SQSVGRSSFYCLEYFPSQMLRTGNNEQFS
rh. 48-D	348	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQSVGRSSFYCLEYFPSQMLRTGNNEFES
rh. 55-D	348	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQSVGRSSFYCLEYFPSQMLRTGNNEFES
rh. 62-D	348	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQSVGRSSFYCLEYFPSQMLRTGNNEFES
AAV7-D	348	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQSVGRSSFYCLEYFPSQMLRTGNNEFES
rh. 52-E	349	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNESES
rh. 51-E	349	SEYQLPYVVLGSAHQGCQPPFPADVEMIPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNESES
hu. 39-E	349	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNESES
rh. 53-E	349	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNESES
hu. 37-E	349	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNEFES
rh. 43-E	348	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNFQFT
rh. 50-E	349	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGYLTNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNESES
rh. 49-E	349	SEYQLPYVVLGSAHQGCLPPFPADVEMIPQYGNLTLNNNG---SQAVGRSSFYCLEYFPSQMLRTGNNFSES

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hu.47-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.29-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.63-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.56-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.45-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.57-B	412	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.35-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.58-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.28-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.51-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.19-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.49-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.52-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP
hu.13-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
AAV2-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.20-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.24-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.64-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.27-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.21-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.22-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.23-B	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.7-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.61-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
rh.56-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.9-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.54-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.53-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.60-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
hu.55-C	413	YTFEDVPEHSSYAHQSOLDRLMNPLIDQYLYLSTTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP

hu.2-C	413	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLNKTQ-
hu.1-C	413	TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu.18-C	413	YTFEDVPEHSSYAHQSQSLDRLLNPLIDQYLYLNKTQ-
hu.3-C	414	SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP
hu.25-C	413	TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu.15-C	413	SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP
hu.16-C	413	SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP
hu.11-C	413	SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu.10-C	413	SNSGTLQQSRLLFSQAGPTSMSLQAKNWLPGP
hu.4-C	413	SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh.54-D	415	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLNKTQ-
rh.48-D	415	TNSGTLQQSRLLFSNAGGTAGNRELQYQGGPTTMAEQAKNWLPGP
rh.55-D	415	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLNKTQ-
rh.62-D	415	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLNKTQ-
AAV7-D	415	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLNKTQ-
rh.52-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLSQAGPSNMSAQARNWLPGP
rh.51-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
hu.39-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSRAGPSNMSAQARNWLPGP
rh.53-E	416	YTFEDVPEHSSYVHSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
hu.37-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
rh.43-E	415	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
rh.50-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
rh.49-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
rh.61-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
hu.41-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
rh.64-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
hu.42-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
rh.57-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
hu.40-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP
AAV8-E	416	YTFEDVPEHSSYAHQSQSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLFSQAGPSNMSAQARNWLPGP

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		416	YTFEDVPEHSSYYAHQSOSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLPGP		
rh. 40-E		416	YTFEDVPEHSGYAHQSOSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQAKNWLPGP		
hu. 67-E		416	YTFEDVPEHSSYYAHQSOSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQAKNWLPGP		
hu. 17-E		416	YQFEDVPEHSSYYAHQSOSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQAKNWLPGP		
hu. 6-E		416	YQFEDVPEHSSYYAHQSOSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQAKNWLPGP		
hu. 66-E		416	YTFEDVPEHSSCAHSQSDDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQAKNWLPGP		
rh. 38-E		416	YTFEDVPEHSSYYAHQSOSLDRLMNPLIDQYLYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQAKNWLPGP		
hu. 32-F		415	YEENVVPFHSSYYAHQSOSLDRLMNPLIDQYLYLSKTINGSG--QNQQTLKFSVAGPSNMAVQGRNYIPGP		
AAV9/hu		415	YEENVVPFHSSYYAHQSOSLDRLMNPLIDQYLYLSKTINGSG--QNQQTLKFSVAGPSNMAVQGRNYIPGP		
hu..31-F		415	YEENVVPFHSSYYAHQSOSLDRLMNPLIDQYLYLSKTINGSG--QNQQTLKFSVAGPSNMAVQGRNYIPGP		
				500	510
				520	530
				540	550
				560	560
AAV5		469	MGRTOGWNLGSGVN-----RASVSAEATTNRMELEGASYQVPPQPNGMNTNLQGSNTYALENTMIFNSQP		
AAV3-3		483	CYRQQRLSKTANDN-----NNSNFPWTAASKYHLNGRDSLNVNGPAMASHKDDEEKFFPMHGMLIFGKEG		
AAV4-4-		477	SIKQQGEFSKTTANQNYKIPATGSDSLIKYETHSTLDGRWSALTGPMPMATAGPADSKFS-NSQLIFAGPKQ		
AAV1-A-		483	CYRQQRVSKTKTDN-----NNSNFTWTGASKYNNLNGRESIINPGTAMASHKDDEDKFFPMGVMIFGKES		
hu. 46-A		483	CYRQQRVSKTKTDN-----NNSNFTWTGASKYNNLNGRESIINPGTAMASHKDDEDKFFPMGVMIFGKES		
hu. 48-A		483	CYRQQRVSKTKTDN-----NNSNFTWTGASKYNNLNGRESIINPGTAVASHKDDEDKFFPMGVMIFGKES		
hu. 44-A		483	CYRQQRVSKTKTDN-----NNSNFTWTGASKYNNLNGRESIINPGTAMASHKDDEDKFFPMGVMIFGKES		
hu. 43-A		484	CYRQQRVSKTKTDN-----NNSNFTWTGASKYNNLNGRESIINPGTAMASHKDDEDKFFPMGVMIFGKES		
AAV6-A		483	CYRQQRVSKTKTDN-----NNSNFTWTGASKYNNLNGRESIINPGTAMASHKDDEDKFFPMGVMIFGKES		
hu. 34-B		482	CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKQG		
hu. 47-B		482	CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKQG		
hu. 29-B		482	CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKQG		
hu. 63-B		482	CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKQD		
hu. 56-B		482	CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKG		
hu. 45-B		482	CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKG		
hu. 57-B		481	CYRQQRVSKTSADN-----NNGEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKG		
hu. 35-B		482	CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLNVNGPAMASHKDDEEKFFPQSGVLIFGKG		

FIG. 2T

hu. 58-B	482	CYRQQRVSKTSADN-----	NNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 28-B	482	CYRQQRVSKTSADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 51-B	482	CYRQQRVSKTSADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 19-B	482	CYRQQRVSKTAADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 49-B	482	CYRQQRVSKTAADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 52-B	482	CYRQQRVSKTSADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 13-B	482	CYRQQRVSKTSADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
AAV2-B	482	CYRQQRVSKTSADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 20-B	482	CYRQQRVSKTSADN-----	GVLIFGKQG MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 24-B	482	CYRQQRVSKTSADN-----	GVLIFGKQD MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 64-B	482	CYRQQRVSKTSADN-----	GVLIFGKQD MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 27-B	482	CYRQQRVSKTSADN-----	GVLIFGKQD MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 21-B	482	CYRQQRVSKTSADN-----	GVLIFGKQD MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 22-B	482	CYRQQRVSKTSADN-----	GVLIFGKQD MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 23-B	482	CYRQQRVSKTSADN-----	GVLIFGKQD MNSEYSWIGATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPQS
hu. 7-C	482	CYRQQRLSKQANDN-----	GVLIFGKQD MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 61-C	482	CYRQQRLSKQANDN-----	GVLIFGKQD MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
rh. 56-C	482	CYRQQRLSKQANDN-----	GVLIFGKQD MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 9-C	482	CYRQQRLSKQANDN-----	GVLIFGKQD MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 54-C	481	CYRQQRLSKQANDN-----	GVLIFGKEG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 53-C	481	CYRQQRLSKQANDN-----	GVLIFGKEG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 60-C	482	CYRQQRLSKQANDN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 55-C	481	CYRQQRLSKQANDN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 2-C	482	CYRQQRLSKQANDN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 1-C	482	CYRQQRLSKQANGN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 18-C	482	CYRQQRLSKQANDN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 3-C	483	CYRQQRLSKQANDN-----	GVLIFGKQG MNNCNFNPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 25-C	482	CYRQQRLSKQANDN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 15-C	482	CYRQQRLSKQANDN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI
hu. 16-C	482	CYRQQRLSKQANDN-----	GVLIFGKQG MNNSNEPWTAATKYHLLNGRDSL VNPGPAMASHKDDEEKFFPMHGTLI

hu.11-C	482	CYRQQRLSSKQANDN-----
hu.10-C	482	CYRQQRLSKQANDN-----
hu.4-C	482	CYRQQRLSKQANDN-----
rh.54-D	485	CFRQQRVSKTLDSN-----
rh.48-D	485	CFRQQRVSKTLDSN-----
rh.55-D	485	CFRQQRVSKTLDSN-----
rh.62-D	485	CFRQQRVSKTLDSN-----
AAV7-D	485	CFRQQRVSKTLDSN-----
rh.52-E	485	CFRQQRVSTTLSQN-----
rh.51-E	485	CFRQQRVSTTLSQN-----
hu.39-E	485	CFRQQRVSTTLSQN-----
rh.53-E	485	CFRQQRVSTTLSQN-----
hu.37-E	485	CFRQQRVSTTLSQN-----
rh.43-E	484	CFRQQRVSTTGTQN-----
rh.50-E	485	CFRQQRVSTTLSQN-----
rh.49-E	485	CFRQQRVSTTLSQN-----
rh.61-E	485	CFRQQRVSTTLSQN-----
hu.41-E	485	CFRQQRVSTTLSQN-----
rh.64-E	485	CFRQQRVSTTLSQN-----
hu.42-E	485	CFRQQRVSTTLSQS-----
rh.57-E	485	CFRQQRVSTTLSQN-----
hu.40-E	485	CFRQQRVSTTLSQN-----
AAV8-E	485	CFRQQRVSTTGTQN-----
rh.58-E	485	CFRQQRVSTTLSQN-----
rh.40-E	485	CFRQQRVSTTLSQN-----
hu.67-E	485	CFRQQRVSTTLSQN-----
hu.17-E	485	CFRQQRVSTTLSQN-----
hu.6-E	485	CFRQQRVSTTLSQN-----
hu.66-E	485	CFRQQRVSTTLSQN-----
rh.38-E	485	CFRQQRVSTTLSQN-----

		483 SYRQQRVSTTVTQN-----NNSEFAWPGASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG	483 SYRQQRVSTTVTQN-----NNSEFAWPGASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG	483 SYRQQRVSTTVTQN-----NNSEFAWPGASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG	570 580 590 600 610 620 630	
AAV5	534	ANPGTTATYLEGNMMLITSESETQPVNVRVAYNVGGOMATNNQSSTTAPATGTYNLQEIVPGSVWMERDVYL				
AAV3-3	548	T--TASNAELD-NVMITDEEEIRTTNPVATEQYGTVANNLQSSNTAPTTGTVNHQGALPGMVWQDRDVYL				
AAV4-4-	546	N--GNTATVPG-TLIFTSEEELAATNATDTDMWGNLPGGDQSNNSNLPTVDRLTALGAvgPMVWQNRDIYY				
AAV1-A-	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFOQSSSTDPATGDVHAMGALPGMVWQDRDVYL				
hu.46-A	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFOQSSSTDPATGDVHAMGALPGMVWQDRDVYL				
hu.48-A	548	A--GASSTALD-NVMITDEEEIKATNPVATERFGTVAVNFOQSSSTDPATGDVHAMGALPGMVWQDRDVYL				
hu.44-A	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFOQSSSTDPATGDVHAMGALPGMVWQDRDVYL				
hu.43-A	549	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFOQSSSTDPATGDVHAMGALPGMVWQDRDVYL				
AAV6-A	548	A--GASNTALD-NVMITDEEEIKATNPVATERFGTVAVNFOQSSSTDPATGDVHAMGALPGMVWQDRDVYL				
hu.34-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.47-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.29-B	547	P--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.63-B	547	S--GKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.56-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.45-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.57-B	546	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.35-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.58-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.28-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.51-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.19-B	547	S--GKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.49-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVHL				
hu.52-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				
hu.13-B	547	S--EKTNVDIE-KVMTDIE-EIRTTNPVATEQYGSVSTNLQSGNTQAAATADVNTQGVLPGMVWQDRDVYL				

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AAV2-B	547	S--EKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTNLQORGNRQAATADVNNTQGVLPGMVWQDRDVYL
hu.20-B	547	S--GKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTNLQQSNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.24-B	547	S--GKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTNLQQSNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.64-B	547	S--GKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTNLQQSNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.27-B	547	S--GKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTNLQQSNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.21-B	547	S--GKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTNLQQSNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.22-B	547	S--GKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTNLQQSNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.23-B	547	S--GKTNVDIE-KVMITDEEEIRTTPNPVATEQYGGSVSTYLQSGNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.7-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.61-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
rh.56-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGSVSTYLQSGNTQAAATSDVNTQGVLPGMVWQDRDVYL
hu.9-C	547	T--NANDADL-HVMITDEEEIRTTPNPVATEQYGNVSNNLQNSNTGPTTENVNHQGALEPMGVWQDRDVYL
hu.54-C	546	T--NATNAEL-NVMITDEEEIRTTPNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.53-C	546	T--NATNAEL-NVMITDEEEIRTTPNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.60-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.55-C	546	T--NATNAEL-NVMITDEEEIRTTPNPVATEQYGYVSNNLQNSNTAASSETEVNHQGALEPMGVWQDRDVYL
hu.2-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGYVSNNLQNSNTAASSETEVNHQGALEPMGVWQDRDVYL
hu.1-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.18-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.3-C	548	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.25-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.15-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.16-C	547	T--NANDADL-NVMITDEEEIRTTPNPVATEQYGYVSNNLQDSNTGPTTGTVNHQGALEPMGVWQDRDVYL
hu.11-C	547	T--NANDADL-HVMITDEEEIRTTPNPVATEQYGNVSNNLQNSNTGPTTENVNHQGALEPMGVWQDRDVYL
hu.10-C	547	T--NANDADL-HVMITDEEEIRTTPNPVATEQYGTVSSNLQQAANTAAQTQVVNNQGALP GMVWQNRDVYL
hu.4-C	547	T--NANDADL-NVMITDEEEIRPTNPVATEQYGTVSSNLQQAANTAAQTQVVNNQGALP GMVWQNRDVYL
rh.54-D	550	A--TN-KTTL-EVLMTNEEEIRPTNPVATEEYGTVSSNLQQAANTAAQTQVVNNQGALP GMVWQNRDVYL
rh.48-D	550	A--AN-KTTL-EVLMTNEEEIRPTNPVATEEYGTVSSNLQQAANTAAQTQVVNNQGALP GMVWQNRDVYL
rh.55-D	550	A--AN-KTTL-EVLMTNEEEIRPTNPVATEEYGTVSSNLQQAANTAAQTQVVNNQGALP GMVWQNRDVYL
rh.62-D	550	A--AN-KTTL-EVLMTNEEEIRPTNPVATEEYGTVSSNLQQAANTAAQTQVVNNQGALP GMVWQNRDVYL

FIG. 2X

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	AAV7-D	AAV8-E	AAV8-hu	AAV9/hu	AAV9-hu	AAV5	
rh..52-E	550 A--TN-KTLE-NVLMTNEEEIRPTNPVATEEYGI VSSNLQAANTAAQTQVVNNQGALPGMVWQNRDVYL						
rh..51-E	550 A--GKDNDYD-S-NVMLTSEE 550 A--GKDNDYD-S-NVMLTSEE						
hu..39-E	550 A--GKDNDYD-S-NVMLTSEE 550 A--GKDNDYD-S-NVMLTSEE						
rh..53-E	550 A--GKDNDYD-S-NVMLTSEE 550 A--GRDNVDY-S-SVMLTSEE						
hu..37-E	550 A--GRDNVDY-S-SVMLTSEE 548 A--ARDNADYS-DVMLTSEE						
rh..43-E	550 A--GRDNVDY-S-SVMLTSEE 550 A--GRDNADYS-NVMLMGYS						
hu..41-E	550 A--GRDNVDY-S-SVMLTSEE 550 A--GKDNDYD-S-NVMLTSEE						
rh..64-E	550 A--GRDNVDY-S-SVMLTSEE 550 A--GKDNDYD-S-NVMLTSEE						
hu..42-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-NVMLTSEE						
rh..57-E	550 A--GRDNVDY-S-SVMLTSEE 550 A--GRDNADYS-DVMLTSEE						
hu..40-E	550 A--GRDNVDY-S-SVMLTSEE 550 A--GRDNADYS-DVMLTSEE						
AAV8-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-SVMLTSEE						
rh..58-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-SVMLTSEE						
rh..40-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-SVMLTSEE						
hu..67-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-SVMLTSEE						
hu..17-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-SVMLTSEE						
hu..6-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-SVMLTSEE						
hu..66-E	550 A--GRDNADYS-DVMLTSEE 550 A--GKDNDYD-S-SVMLTSEE						
rh..38-E	550 A--GRDNADYS-DVMLTSEE 548 T--GRDNVDAD-KVMITNEEE						
hu..32-F	548 T--GRDNVDAD-KVMITNEEE 548 T--GRDNVDAD-KVMITNEEE						
AAV9/hu							
hu..31-F							
	640	650	660	670	680	690	700

FIG. 2Y

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AAV3-3	615	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQIMIKNTPVANPPTTFSPAKFAASFITQYSTGQVSVEIE
AAV4-4-	613	QGPIWAKIPTDGHFHPSPLIGFFGLKHPPQIFIKNTPVANPATTFSSTPVNSFITQYSTGQVSVEIQID
AAV1-A-	615	QGPIWAKIPTDGHFHPSPLMGFFGLKNPQQILIKNTPVANPPAEFSATKFAASFITQYSTGQVSVEIE
hu..4 6-A	615	QGPIWAKIPTDGHFHPSPLMGFFGLKNPQQILIKNTPVANPPAEFSATKFAASFITQYSTGQVSVEIE
hu..48-A	615	QGPIWAKIPTDGHFHPSPLMGFFGLKNPQQILIKNTPVANPPAEFSATKFAASFITQYSTGQVSVEIE
hu..44-A	615	QGPIWAKIPTDGHFHPSPLMGFFGLKNPQQILIKNTPVANPPAEFSATKFAASFITQYSTGQVSVEIE
hu..43-A	616	QGPIWAKIPTDGHFHPSPLMGFFGLKNPQQILIKNTPVANPAAEFSATKFAASFITQYSTGQVSVEIE
AAV6-A	615	QGPIWAKIPTDGHFHPSPLMGFFGLKNPQQILIKNTPVANPAAEFSATKFAASFITQYSTGQVSVEIE
hu..34-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKNPQQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..47-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..29-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..63-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..56-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..45-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..57-B	613	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..35-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..58-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKFASFITQYSTGQVSVEIE
hu..28-B	614	QGPTWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..51-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..19-B	614	QGPIWAKIPTDGHFHPSPLVGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..49-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
AAV2-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..52-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..13-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..64-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..20-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..24-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..64-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..27-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..21-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE
hu..22-B	614	QGPIWAKIPTDGHFHPSPLMGFFGLKHPPQILIKNTPVANPSTTFSAAKEASFITQYSTGQVSVEIE

hu. 23-B	614	RGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP STTFSAAKEAS FITQYSTG QVSVEIE
hu. 7-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 61-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
rh. 56-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 9-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 54-C	613	RGPPIWAKI PHTADGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 53-C	613	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 60-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 55-C	613	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 2-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 1-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 18-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 3-C	615	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 25-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 15-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 16-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 11-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 10-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
hu. 4-C	614	QGPPIWAKI PHTDGHF HPPSPIMGGFF GLK HPPPQILIKNT PVPANP PTNFSAAKEAS FITQYSTG QVSVEIE
rh. 54-D	616	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPANP PEVFTP VPAKFAS FITQYSTG QVSVEIE
rh. 48-D	616	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPANP PEVFTP VPAKFAS FITQYSTG QVSVEIE
rh. 55-D	616	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPANP PEVFTP VPAKFAS FITQYSTG QVSVEIE
rh. 62-D	616	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPANP PEVFTP VPAKFAS FITQYSTG QVSVEIE
AAV7-D	616	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPANP PEVFTP VPAKFAS FITQYSTG QVSVEIE
rh. 52-E	617	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPADP TAFNQAKLNSFITQYSTG QVSVEIE
rh. 51-E	617	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPADP TAFNQAKLNSFITQYSTG QVSVEIE
hu. 39-E	617	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPADP TAFNQAKLNSFITQYSTG QVSVEIE
rh. 53-E	617	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPADP TAFNQAKLNSFITQYSTG QVSVEIE
hu. 37-E	617	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPADP TAFNQAKLNSFITQYSTG QVSVEIE
rh. 43-E	615	QGPPIWAKI PHTDGNFHPSPLMGGFF GLK HPPPQILIKNT PVPADP TAFNQAKLNSFITQYSTG QVSVEIE

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FIG. 2AB

AAV6-A	685	WELQKENSKRWNPEVQYTSNYAKSANVDFTVDDNNGLYTEPRPIGTRYLTRL*
hu. 34-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 47-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 29-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 63-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 56-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 45-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 57-B	683	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 35-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 58-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 28-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 51-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 19-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 49-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 52-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 13-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
AAV2-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 20-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 24-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 64-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 27-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 21-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 22-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 23-B	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 7-C	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 61-C	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
rh. 56-C	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 9-C	684	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPCPIGTRYLTRL*
hu. 54-C	683	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*
hu. 53-C	683	WELQKENSKRWNPEIQQYTSNYNKSVNVDFTVDDTNGVYSEPRPIGTRYLTRL*

hu. 60-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 55-C	683	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 2-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 1-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 18-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 3-C	685	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 25-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 15-C	684	WELQEDSKRWNPEIQQTSNNYKPVNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 16-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 11-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 10-C	684	WELLKENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
hu. 4-C	684	WELQENSKRWNPEIQQTSNNYKSTNVDFTVDTNGVYSEPRPIGTRYLTRLN*
rh. 54-D	686	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVDSQGVYSEPRPIGTRYLTRLN*
rh. 48-D	686	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVDSQGVYSEPRPIGTRYLTRLN*
rh. 55-D	686	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVDSQGVYSEPRPIGTRYLTRLN*
rh. 62-D	686	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVDSQGVYSEPRPIGTRYLTRLN*
AAV7-D	686	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVDSQGVYSEPRPIGTRYLTRLN*
rh. 52-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 51-E	687	WEPQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
hu. 39-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 53-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
hu. 37-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 43-E	685	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 50-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 49-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 61-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
hu. 41-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 64-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
hu. 42-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*
rh. 57-E	687	WELQENSKRWNPEIQQTSNSNEDKQTGVDEAVNTATEGVYSEPRPIGTRYLTRLN*

hu. 40-E	687	WELQKENSKRWNPEIQQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRLN*
AAV8-E	687	WELQKENSKRWNPEIQQYTSNYYKSTSVDFAVNTEGVYSEPRPIGTRYLTRLN*
rh. 58-E	687	WELQKENSCKWNPEIQQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRLN*
rh. 40-E	687	WELQKENSKRWNPEIQQYTSNYYKSTNVDFAVNSEGTYSERPIGTRYLTRLN*
hu. 67-E	687	WELQKENSKRWNPEIQQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRLN*
hu. 17-E	687	WELQKENSKRWNPEIQQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRLN*
hu. 6-E	687	WELQKENSKRWNPEIQQYTSNYYKSTNVDFAVDTNGVYSEPRPIGTRYLTRLN*
hu. 66-E	687	WELQKENSKRWNPEIQQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRLN*
rh. 38-E	687	WELQKENSKRWNPEIQQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRLN*
hu. 32-F	685	WELQKENSKRWNPEIQQYTSNYYKSNNVEFAVNTEGVYSEPRPIGTRYLTRLN*
AAV9/hu	685	WELQKENSKRWNPEIQQYTSNYYKSNNVEFAVNTEGVYSEPRPIGTRYLTRLN*
hu. 31-F	685	WELQKENSKRWNPEIQQYTSNYYKSNNVEFAVSTEGVYSEPRPIGTRYLTRLN*

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FIG. 3A

hu.27-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.21-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.22-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.23-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.7-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.61-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
rh.56-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.9-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.54-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.53-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.60-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.55-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.2-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.1-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.18-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.3-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.25-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.15-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.16-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.11-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.10-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.4-C	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
rh.54-D	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
rh.48-D	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
rh.55-D	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
rh.62-D	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
AAV7-D	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
rh.52-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
rh.51-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA
hu.39-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTGAAGGAATAAGACAGTGGTGGAA

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FIG. 3C

hu. 48-A	71	ACTTGAACCTGGAGCCCCAACCCACCAAGGCCAAAGCCAAACCAAGGACGACGGCCGGTCTGGTGCT
hu. 44-A	71	AGCTCAGACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 43-A	71	ACCTGAAACCTGGAGCCCCAACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
AAV6-A	71	ACTTGAACCTGGAGCCCCAACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 34-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 47-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 29-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 63-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 56-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 45-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 57-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 35-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 58-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 28-B	71	AACTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 51-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 19-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 49-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 52-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 13-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
AAV2-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 20-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 24-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 64-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 27-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 21-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 22-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 23-B	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 7-C	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
hu. 61-C	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT
rh. 56-C	71	AGCTCAAACCTGGCCCACCCACCAAGGCCAACCCAAAGGCCAGAGGGATAAGGACGACGGCCGGTCTGGTGCT

hu. 9-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATCAGGACAACAGGCAGGGGTCTTGTGCT
hu. 54-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGGACAGCAGGGGTCTTGTGCT
hu. 53-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 60-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 55-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 2-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 1-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 18-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 3-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 25-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 15-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 16-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCCCAGAGGGCATAAGGACAGCAGGGGTCTTGTGCT
hu. 11-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCAACCCAGGACAGCAGGGGTCTTGTGCT
hu. 10-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGGCCAAAGGCCAACCCAGGACAGCAGGGGTCTTGTGCT
hu. 4-C	71	AGCTCAAACCTGGCCCACCAACCACCAAAAGCCAACCCAGGACAGCAGGGGTCTTGTGCT
rh. 54-D	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 48-D	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 55-D	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 62-D	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
AAV7-D	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 52-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 51-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
hu. 39-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 53-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
hu. 37-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 43-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 50-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 49-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
rh. 61-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT
hu. 41-E	71	ACCTGAAAACCTGGAGGCCCGAAACCCAACCCAGGACAGCAGGGGGGTCTTGTGCT

FIG. 3F

hu. 63-B	141	TCCTGGGTACAAGTACCTTGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 56-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 45-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 57-B	138	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 35-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 58-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 28-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 51-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 19-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 49-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 52-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 13-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
AAV2-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 20-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 24-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 64-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 27-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 21-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 22-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 23-B	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 7-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 61-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
rh. 56-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 9-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 54-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 53-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 60-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 55-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 2-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC
hu. 1-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGGCCAAGGGTCAACGAGGCAGACGCC

hu.18-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGAGCCGGTCAACGGGGTCAACGGGGC
hu.3-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGAGCCGGTCAACGGGGCAGACGCC
hu.25-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGAGAGCCGGTCAACGGGGCAGACGCC
hu.15-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGC
hu.16-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGTCAACGGGGCAGACGCC
hu.11-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGTCAACGGGGCAGACGCC
hu.10-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGTCAACGGGGCAGACGCC
hu.4-C	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGTCAACGGGGCAGACGCC
rh.54-D	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.48-D	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.55-D	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.62-D	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
AAV7-D	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.52-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.51-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
hu.39-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.53-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
hu.37-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.43-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.50-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.49-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.61-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
hu.41-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.64-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
hu.42-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
rh.57-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGACTTCAACGGGAGAGCCGGGAGACGCA
hu.40-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGAGAGCCGGGAGACGCA
AAV8-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGAGAGCCGGGAGACGCA
rh.58-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGAGAGCCGGGAGACGCA
rh.40-E	141	TCCTGGGTACAAGTACCTCGGACCCCTCAACGGACTCTAACGGGAGAGCCGGGAGACGCA

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hu. 67-E	141	TCTGGGCTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGGAGCCCCGTCAATGGGGGACGGCA	220	230	240	250	260	270	280
hu. 17-E	141	TCTGGGCTGCAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGGAGCCCCGTCAACGGGGGACGGCA							
hu. 6-E	141	TCTGGGCTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGGAGCCCCGTCAACGGGGGACGGCA							
hu. 66-E	141	TCTGGGCTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGGAGCCCCGTCAACGGGGGACGGCA							
rh. 38-E	141	TCTGGGCTACAAGTACCTCGGACCCCTCAACGGACTCGACAAGGGGAGCCCCGTCAACGGGGGACGGCA							
hu. 32-F	141	TCTGGGTTACAAGTACCTCGGACCCGGCAACGGACTCGACAAGGGGAGCCCCGTCAACGGGGGACGGCA							
AAV9/hu	141	TCTGGGTTACAATAACCTTGACCCGGCAACGGGACTCGACAAGGGGAGCCCCGTCAACGGGGGACGGCA							
hu. 31-F	141	TCTGGGTTACAAGTACCTCGGACCCGGCAACGGACTCGACAAGGGGAGCCCCGTCAACGGGGGACGGCA							
AAV5	208	GT CG GG CG AG AG GC AC CG AC AT CT CG T AC A ACC G AG C AT AT CG AG CT T G AG G C G G T G AG A C A A C C C C T A C C T C A A G T A C A							
AAV3-3	211	GC AG GG CC CT CG A A C A G G A C A A A G G C T T A C G A C C A G G C G C T C A A G G G C C G T C A A G G G C C G T G A C A A C C C C T A C C T C A A G T A C A							
AAV4-4-	208	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C A A G G G C C G T G A C A A C C C C T A C C T C A A G T A C A							
AAV1-A	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C A A G G G C C G T G A C A A C C C C T A C C T C A A G T A C A							
hu. 46-A	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C A A A G G G C C G T G A C A A C C C C T A C C T C A A G T A C A							
hu. 48-A	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C A A A G G G C C G T G A C A A C C C C T A C C T C A A G T A C A							
hu. 44-A	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 43-A	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
AAV6-A	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 34-B	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 47-B	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 29-B	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 63-B	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 56-B	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 45-B	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 57-B	208	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 35-B	211	GG GG GG CC CT CG A G G C A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 58-B	211	GG GG GG CC CT CG A G G C A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							
hu. 28-B	211	GG GG GG CC CT CG A G G C A C G A C A A G G C C T T A C G A C C A G G C G C T C G A C A G G G G G A C A A C C C C T A C C T C A A G T A C A							

FIG. 31

hu. 51-B	211	CGGGCCCTCGAGGACAAAGCCTACGACCGGGAGACAACCCGTACCTCAAGTACA
hu. 19-B	211	GCGGCCCTCGAGGACAAAGCCTACGACCGGGAGACAACCCGTACCTCAAGTACA
hu. 49-B	211	GCGGCCCTCGAGTACGACAAAGCCTACGACCGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 52-B	211	GCGGCCCTCGAGCAGAACGGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 13-B	211	GCGGCCCTCGAGGACAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
AAV2-B	211	GCGGCCCTCGAGGACAAAGCACAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 20-B	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 24-B	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGATAACCCGTACCTCAAGTACA
hu. 64-B	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 27-B	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 21-B	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 22-B	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 23-B	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 7-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 61-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
rh. 56-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 9-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 54-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 53-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 60-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 55-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 2-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 1-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 18-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 3-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 25-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 15-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 16-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 11-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA
hu. 10-C	211	GCGGCCCTCGAGGACAAAGGCAAAGCCTACGACGGGAGACTCGACAGGGAGACAACCCGTACCTCAAGTACA

hu. 4-C	211	GCGGCCCTCGAGCACCGACAAGGCATAAGGACAACGGCCTACGACCGGAGCTCGACAGGGAGACAACCCGTACCTCAAGTACA
rh. 54-D	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 48-D	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 55-D	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 62-D	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
AAV7-D	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 52-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 51-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 39-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 53-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 37-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 43-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 50-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 49-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 61-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 41-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 64-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 42-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 57-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 40-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
AAV8-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 58-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 40-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 67-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 17-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 6-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 66-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
rh. 38-E	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTTGCGGTATA
hu. 32-F	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTCAAGTACA
AAV9/hu	211	GCGGCCCTCGAGCACCGACAAGGCCTAACGGCCTACGACCGAGCTCAAAGGGGTGACAATCCGTACCTCAAGTACA

			290	300	310	320	330	340	350
AAV5	278		ACCACGGCGACGCCGAGTTTCAGGAGAACATCCTTCGGGGAAACCTCGGAAAGGC						
AAV3-3-	281		ACCACGGCGACGCCGAGTTTCAGGAGGTTCAGGAGATACTGTTGGGGCAACCTTGGCAGAGC						
AAV4-4-	278		ACCACGGCGACGCCGAGTTCCAGCAGGGCTTCAGGAGACATCGTTGGGGCAACCTCGGCAGAGC						
AAV1-A	281		ACCACGGCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACTGTTGGGGCAACCTCGGGGAGC						
hu.46-A	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAGAAGATACTGTTGGGGCAACCTCGGGGGAGC						
hu.48-A	281		ACCACGGCGACGCCGAGTTCAAGGAGGTCTGCAAGAAGATACTGTTGGGGCAACCTCGGGGGAGC						
hu.44-A	281		ACCACGGCGACGCCGAGTTTCAGGAGCGCTTCAGGAGGTCTGCAAGAAGATACTGTTGGGGCAACCTCGGGGAGC						
hu.43-A	281		ACCACGGCGACGCCGAGTTTCAGGAGGTCTGCAAGAAGATACTGTTGGGGCAACCTCGGGGGAGC						
AAV6-A	281		ACCACGGCGACGCCGAGTTTCAGGAGGTCTGCAAGAAGATACTGTTGGGGCAACCTCGGGGGAGC						
hu.34-B	281		ACCACGGCGACGCCGAGTTTCAGGAGCGCTTAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.47-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTCAGGAGGTCTTGGGGCAACCTCGGACGAGC						
hu.29-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGTCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.63-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.56-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.45-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.57-B	278		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.35-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.58-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.28-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.51-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.19-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.49-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.52-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.13-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
AAV2-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						
hu.20-B	281		ACCACGGCGACGCCGAGTTTCAGGAGGGCTTAAAGAAGATACTGTTGGGGCAACCTCGGACGAGC						

hu. 24-B	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 64-B	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 27-B	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 21-B	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 22-B	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 23-B	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 7-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 61-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
rh. 56-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 9-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 54-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 53-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 60-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 55-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 2-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 1-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 18-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 3-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 25-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 15-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 16-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 11-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 10-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
hu. 4-C	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
rh. 54-D	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
rh. 48-D	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
rh. 55-D	281	ATCACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
rh. 62-D	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
AAV7-D	281	ACCAACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC
rh. 52-E	281	ATCACGGCCGACGGGGAGTTTCAGGAGGCCCTTAAGAGGATAACGTCTTGGGGCAACCTCGGACGAGC

FIG. 3N

AAV1-A	351	AGTCTTCAGGCCAAGAACGGGTTCTCGAACCTCTCGGT---CTGGGTAGGAAGGGCTAAGACGGCT
hu.4.6-A	351	AGTCTTCAGGCCAAGAACGGGTTCTCGAACCTCTCGGT---CTGGGTAGGAAGGGCTAAGACGGCT
hu.4.8-A	351	AGTCTTCAGGCCAAGAACGGGTTCTCGAACCTCTCGGT---CTGGGTAGGAAGGGCTAAGACGGCT
hu.4.4-A	351	AGTCTTCAGGCCAAGAACGGGTTCTCGAACCTCTCGGT---CTGGGTAGGAAGGGCTAAGACGGCT
hu.4.3-A	351	AGTCTTCAGGCCAAGAACGGGTTCTCGAACCTCTCGGT---CTGGGTAGGAAGGGCTAAGACGGCT
AAV6-A	351	AGTCTTCAGGCCAAGAACGGGTTCTCGAACCTCTCGGT---CTGGGTAGGAAGGGCTAAGACGGCT
hu.34-B	351	AGTCTTCAGGCCAAGAACGGGTTACTTGAAACCTCTGGC---CTGGTGTAGGAACCTGTAAAGACGGCT
hu.47-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.29-B	351	AGTCTTCAGGCCAAGAACGGGTTCTGAAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.63-B	351	AGTCTTCAGGCCAAGAACGGGTTCTGAAACCTCTGGC---CTGGTGTAGGAACCTGTAAAGACGGCT
hu.56-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGAACCTGTAAAGACGGCT
hu.45-B	351	AGTCTTCAGGCCAAGAACGGGTTCTGAAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.57-B	348	AGTCTTCAGGCCAAGAACGGGTTCTGAAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.35-B	351	AGTCTTCAGGCCAAGAACGGGTTACTTGAAACCTCTGGC---CTGGTGTAGGAACCTGTAAAGACGGCT
hu.58-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAGGCTGTAAAGACGGCT
hu.28-B	351	AGTCTTCAGGCCAAGAACGGGTTCTGAAACCTCTGAGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.51-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.19-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.49-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.52-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.13-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
AAV2-B	351	AGTCTTCAGGCCAAGAACGGGTTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.20-B	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.24-B	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.64-B	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.27-B	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.21-B	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.22-B	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.23-B	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT
hu.7-C	351	AGTCTTCAGGCCAAGAACGGGATTCTTGAACCTCTGGC---CTGGTGTAGGGAAACCTGTAAAGACGGCT

hu. 61-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 56-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 9-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 54-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 53-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 60-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 55-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 2-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 1-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 18-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 3-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 25-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 15-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 16-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 11-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 10-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 4-C 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 54-D 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 48-D 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 55-D 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 62-D 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 AAV7-D 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 52-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 51-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 39-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 53-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 hu. 37-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 43-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 50-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT
 rh. 49-E 351 AGTCTCCAGGCCAAAAAGAGGGTTCTTGAAACCTCTGGC---CTGGTTGAGGAACCTGTAAAGACGGCT

rh. 61-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 41-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CCGGTTGAGGAAGGGCTAAGACGGCT											
rh. 64-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 42-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
rh. 57-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 40-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
AAV8-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
rh. 58-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
rh. 40-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 67-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 17-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 6-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 66-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
rh. 38-E	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 32-F	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
AAV9/hu	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
hu. 31-F	351	AGTCTCCAGGCCAAGAACGGTTCTGAACCTCTCGGT---CTGGTTGAGGAAGGGCTAAGACGGCT											
		430	440	450	460	470	480	490					
AAV5	415	CCTACCGGAAGGGATAGACGACCACTTCGA-----AAAA											
AAV3-3-	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GAACCGGAACCATCTGGTGTGGCAAT											
AAV4-4-	415	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----CAGCCCGAACCTCCACGGGTATCGGAAAT											
AAV1-A-	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GAGCCAGACTCCCTCGGGCATCGGAAAGA											
hu. 46-A	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GAGCCAGACTCCCTCGGGCATCGGAAAGA											
hu. 48-A	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GAGCCAGACTCCCTCGGGCATCGGAAAGA											
hu. 44-A	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GGGCCAGACTCCCTCGGGCATCGGAAAGA											
hu. 43-A	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GGGCCAGACTCCCTCGGGCATCGGAAAGA											
AAV6-A	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GAGCCAGACTCCCTCGGGCATCGGAAAGA											
hu. 34-B	418	CCTGGAAAGAACGGCTCAGTCAGTCTCAG----GAGCCAGACTCCCTCGGGCATCGGAAAGA											

hu. 47-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 29-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGATTCCTCCCTCGGGAAACTGGAAAGT
hu. 63-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 56-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 45-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 57-B	415	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 35-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 58-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 28-B	418	CGGGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGATTCCTCCCTCGGGAAACTGGAAAGT
hu. 51-B	418	CCAGGAAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 19-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 49-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 52-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 13-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
AAV2-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 20-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 24-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 64-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 27-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 21-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 22-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 23-B	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 7-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 61-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
rh. 56-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 9-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 54-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 53-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 60-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG
hu. 55-C	418	CCGGGAGAAAAGGGCCGGTAGAGCCACTCTGTG---GAGGCCAGACTCCTCCCTCGGGAAACCGGAAAGG

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rh. 58-E	418	CCTGGAAAGAAGGAGCCGGTAGAACCGTCAACCTCAGCGTTCCCCGACTCCTCCACGGCATCGGCAAGA	500	510	520	530	540	550	560
rh. 40-E	418	CCTGGAAAGAAGGAGCCGGTAGAACCGTCAACCTCAGCGTTCCCCGACTCCTCCACGGCATCGGCAAGA	500	510	520	530	540	550	560
hu. 67-E	418	CCTGGAAAGAAGGAGCCGGTAGAACCGTCAACCTCAGCGTTCCCCGACTCCTCCACGGCATCGGCAAGA	500	510	520	530	540	550	560
hu. 17-E	418	CCTGGAAAGAAGGAGCCGGTAGAACCGTCAACCTCAGCGTTCCCCGACTCCTCCAGACTCCTCTACGGGCATCGGCAAGA	500	510	520	530	540	550	560
hu. 6-E	418	CCTGGAAAGAAGGAGCCGGTAGAACCGTCAACCTCAGCGTTCCCCGACTCCTCCAGACTCCTCTACGGGCATCGGCAAGA	500	510	520	530	540	550	560
hu. 66-E	418	CCTGGAAAGAAGGAGCCGGTAGAACCGTCAACCTCAGCGTTCCCCGACTCCTCCAGACTCCTCTACGGGCATCGGCAAGA	500	510	520	530	540	550	560
rh. 38-E	418	CCTGGAAAGAAGGAGCCGGTAGAACCGTCAACCTCAGCGTTCCCCGACTCCTCCACGGGCATCGGCAAGA	500	510	520	530	540	550	560
hu. 32-F	418	CCTGGAAAGAAGGAGCCGTCTCAG---GAACCGGACTCCTCCCTCAG---GAACCGGACTCCTCCGGGTATTGCCAAAT	500	510	520	530	540	550	560
AAV9/hu	418	CCTGGAAAGAAGGAGCCGTCTCAG---GAACCGGACTCCTCCGGGTATTGCCAAAT	500	510	520	530	540	550	560
hu. 31-F	418	CCTGGAAAGAAGGAGCCGTCTCAG---GAACCGGACTCCTCCGGGTATTGCCAAAT	500	510	520	530	540	550	560
AAV5	452	GAAAGAAGGGCTGGACCAGGGAAAGAGGAAGGACTCCAAGGCCTTCACCTCAGACGCCAAGGCTGGACCTGGCCAGCGGG	500	510	520	530	540	550	560
AAV3-3	485	CGGGCAAACAGCCTGCCAGAAAAGACTAAATTCCGGTCAGACTGGAGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
AAV4-4	482	AAGGCCAAGCAGCCGGCTAAAAAGAGCTCGTTTCCGAAGAGCAAACCTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
AAV1-A	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 46-A	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 48-A	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 44-A	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 43-A	488	AAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
AAV6-A	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 34-B	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 47-B	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 29-B	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 63-B	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 56-B	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 45-B	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 57-B	482	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560
hu. 35-B	485	CAGGCCAGCAGCCCCTGCAAAAGAGACTCAATTTCGGTCAGACTGGGACTCAGAGTCAGTCCCAGAC---	500	510	520	530	540	550	560

FIG. 3T

hu.58-B	485	CGGGCAACCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCGCAGACTCCGTACCTGAC--
hu.28-B	485	CGGGCAACCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGACTCCGTACCTGAC--
hu.51-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCGCAGACTCAGTACCTGAC--
hu.19-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.49-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.52-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.13-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
AAV2-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.20-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.24-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.64-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.27-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.21-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.22-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.23-B	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.7-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.61-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
rh.56-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.9-C	485	CGGGCCATCAGGCCCTGCGAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.54-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.53-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.60-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.55-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.2-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.1-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.18-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.3-C	488	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.25-C	485	CGGGCCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.15-C	485	CGGGCAACCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--
hu.16-C	485	CGGGCAACCAGGCCCTGCAAGAAAGAGATTGAATTTCGGTCAGACTGGAGACCTCAGTACCTGAC--

hu. 11-C	485	CGGGCCATCAGCCTGCGAGAAAGAGATTGAATTGGTCAGACTGGAGACGCCAGACTCCGTACCTGAC--
hu. 10-C	485	CGGGCCAGCAGCCTGCGAGAAAGAGATTGAATTGGTCAGACTGGAGACGCCAGACTCCGTACCTGAC--
hu. 4-C	485	CGGGCCAGCAGCCTGCGAGAAAGAGATTGAATTGGTCAGACTGGAGACGCCAGACTCCGTACCTGAC--
rh. 54-D	488	AAGGCCAGCAGCCCCGCTAGAAAGAGACTGAACCTGGGCAGACTGGGCAGACTGGCCAGACTCCCCGAC--
rh. 48-D	488	AAGGCCAGCAGCCCCGCTAGAAAGAGACTGAACCTGGGCAGACTGGGCAGACTGGCCAGACTCCCCGAC--
rh. 55-D	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 62-D	488	AAGGCCAGCAGCCCCGCTAGAAAGAGACTGAACCTGGGCAGACTGGGCAGACTGGCCAGACTCCCCGAC--
AAV7-D	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 52-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 51-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 39-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 53-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 37-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 43-E	485	AAGGCCAAACAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTAGAGCAGAC--
rh. 50-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 49-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 61-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 41-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 64-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 42-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 57-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 40-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
AAV8-E	488	AAGGCCAAACAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 58-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 40-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 67-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 17-E	488	CAGGCCAGCAGCCCCGCCAGAAAGAGACTCAATTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
hu. 6-E	488	CAGGCCAGCAGCCCCGCCAGAAAGAGACTCAACTTGGGCAGACTGGGCAGACTCCCCGAC--
hu. 66-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAACTTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--
rh. 38-E	488	AAGGCCAGCAGCCCCGCCAGAAAGAGACTCAACTTGGTCAGAGTCAGACTGGGCAGACTCCCCGAC--

			485	CGGGTTCACAGCCCGCTAAAAAGAAACTCAATTTCGGTCAGACTGGGCACACAGAGTCAGTCCCCGAC--			
AAV9/hu	485			CGGGTGCACAGCCCGCTAAAAAGAGAACTCAATTTCGGTCAGACTGGGCACACAGAGTCAGTCCCCGAC--			
hu.31-F	485			CGGGTTCACAGCCCGCTAAAAAGAAACTCAATTTCGGTCAGACTGGGCACACAGAGTCAGTCCCCGAC--			
			570	580	590	600	610
			552	ATCCCAGCAGCTGC AA ATCCAGGCCAAC CC AGCCTCAAGTTGGAGCTGATA AA TGGCTTGCGGGAGGT			
AAV3-3	552	-	-	-CCTCAACCTCTCGGAGAACCCAGCAGGGATCAACTTCCGGACCATGTC T -----GATGACAGTGA G TGCAGCAGCT			
AAV4-4-	546	-	-	-CCACAAACCTCTCGGAGAACCTCCAGCAACCCCCGCTGCTGTTGGACCTACTACAATGGCTTCAGGGGT			
AAV1-A-	552	-	-	-CCACAAACCTCTCGGAGAACCTCCAGCAACCCCCGCTGCTGTTGGACCTACTACAATGGCTTCAGGGGT			
hu.46-A	552	-	-	-CCACAAACCTCTCGGAGAACCTCCAGCAACCCCCGCTGCTGTTGGACCTACTACAATGGCTTCAGGGGT			
hu.48-A	552	-	-	-CCACAAACCTCTCGGAGAACCTCCAGCAACCCCCGCTGCTGTTGGACCTACTACAATGGCTTCAGGGGT			
hu.44-A	552	-	-	-CCACAAACCTCTCGGAGAACCTCCAGCAACCCCCGCTGCTGTTGGACCTACTACAATGGCTTCAGGGGT			
hu.43-A	555	-	-	-CCTCAACCAATCGGAGAACCCAGCAGGGCCCTCTGGCTGGGACCTACTACAATGGCTTCAGGGGT			
AAV6-A	552	-	-	-CCACAAACCTCTCGGAGAACCTCCAGCAACCCCCCCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.34-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.47-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.29-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.63-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.56-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.45-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.57-B	549	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.35-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.58-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.28-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.51-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.19-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTTCAGGAGT			
hu.49-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.52-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTACAGGAGT			
hu.13-B	552	-	-	-CCCCAGGCTCTGGACAGGCCACCCAGCAGGGCCCTCTGGGTCTGGGAACTAATACGATGGCTTCAGGAGT			

AAV2-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTACAGGCAGT
hu.20-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTCAGGCAGT
hu.24-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTCAGGCAGT
hu.64-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTCAGGCAGT
hu.27-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTCAGGCAGT
hu.21-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTCAGGCAGT
hu.22-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTCAGGCAGT
hu.23-B	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAACATAATACGATGGCTCAGGCAGT
hu.7-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.61-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
rh.56-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.9-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.54-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.53-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.60-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.55-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.2-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.1-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.18-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.3-C	555	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.25-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.15-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.16-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.11-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.10-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
hu.4-C	552	-CCCCAGCCTCTGGACAGCCACCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTACTACAATGGCTACAGGCAGT
rh.54-D	555	-CCTCAACCAATCGGAGAACCCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTGGTACAATGGCTCAGGGGT
rh.48-D	555	-CCTCAACCAATCGGAGAACCCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTGGTACAATGGCTCAGGGGT
rh.55-D	555	-CCTCAACCAATCGGAGAACCCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTGGTACAATGGCTCAGGGGT
rh.62-D	555	-CCTCAACCAATCGGAGAACCCAGGCCAGGACAGCCACCCCTCTGGTCTGGGAATCTGGTACAATGGCTCAGGGGT

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FIG. 3Y

AAV3-3	622	GGGCACCAATGGCAGACAATAACCGAGGGTGCCGATGGAGTCGGTAATTCCCTCAGGAATTGGCATTGCG
AAV4-4-	604	GGGGAGCTGAGTCGGGATGGGAGTCGGTAATTCCCTCGGGTGAATTGGCATTTGCG
AAV1-A	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 46-A	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 48-A	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 44-A	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 43-A	625	GGGCTCCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
AAV6-A	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 34-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 47-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 29-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 63-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 56-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 45-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 57-B	619	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGAGATGGCATTTGCG
hu. 35-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 58-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 28-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 51-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 19-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 49-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 52-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 13-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
AAV2-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 20-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 24-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 64-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 27-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 21-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG
hu. 22-B	622	GGGCACCAATGGCAGACAATAACCGAGGGGCCGACGGAGTCGGTAATTGGCATTTGCG

hu. 23-B	622	GGCGCACCAATGGCAGACAAATAACCAGGGGCCCCGACGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 7-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 61-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 56-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 9-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 54-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 53-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 60-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 55-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 2-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 1-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 18-C	622	GGCGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 3-C	625	GGGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 25-C	622	GGGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 15-C	622	GGGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 16-C	622	GGGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 11-C	622	GGGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 10-C	622	GGGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 4-C	622	GGGCACCAATGGCAGACAAATAACCAGGGTGGCGATGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 54-D	625	GGGGCTCCAAATGGCTGACAAATAACGAAGGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 48-D	625	GGGGCACCAATGGCTGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 55-D	625	GGGGCACCAATGGCAGACAAATAACGAAGGGTGGCGAGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 62-D	625	GGGGCACCAATGGCTGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
AAV7-D	625	GGGGCACCAATGGCAGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 52-E	625	GGGGCACCAATGGCAGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 51-E	625	GGGGCACCAATGGCAGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 39-E	625	GGGGCACCAATGGCAGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 53-E	625	GGGGCACCAATGGCAGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
hu. 37-E	625	GGGGCTCCAAATGGCAGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC
rh. 43-E	622	GGGGCACCAATGGCAGACAAATAACGAAGGGGGGGAGTGGGTAAATTCCCTGGGAATTGGCATTTGCC

FIG. 3AB

AAV6-A	692	ATTCCACATGGCTGGGCACAGAGTCATACCACCGAACCGACCCGAACATGGGCCCTGGCCACCTATAACAA
hu..34-B	692	ATTCCACATGGATGGCAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..47-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..29-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..63-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..56-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..45-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..57-B	689	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..35-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..58-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..28-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..51-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..19-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..49-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..52-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..13-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
AAV2-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..20-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..24-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..64-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..27-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..21-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..22-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..23-B	692	ATTCCACATGGATGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..7-C	692	ATTCCCAATGGCTGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..61-C	692	ATTCCCAATGGCTGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
rh..56-C	692	ATTCCCAATGGCTGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..9-C	692	ATTCCCAATGGCTGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..54-C	692	ATTCCCAATGGCTGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA
hu..53-C	692	ATTCCCAATGGCTGGGAGAGTCATACCACCGAACCTGGGCCCTGGCCACCTATAACAA

FIG. 3AC

hu. 60-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGCACCTGGGCCCTGGCCACCTACAA
hu. 55-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACCTACAA
hu. 2-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 1-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 18-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 3-C	695	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 25-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 15-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 16-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 11-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 10-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 4-C	692	ATTCCCCAATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 54-D	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 48-D	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 55-D	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 62-D	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
AAV7-D	695	ATTCCACATGGCTGGCGACAGAGTCATTACCAACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 52-E	695	ATTCCACATGGCTGGCGACAGAGTTACCAACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 51-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 39-E	695	ATTCCACATGGCTGGCGACAGAGTCAGAGTTACCAACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 53-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 37-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 43-E	692	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 50-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 49-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 61-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 41-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 64-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
hu. 42-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA
rh. 57-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGACCCGAACCTGGGCCCTGGCCACATACAA

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hu.40-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGAACCGAACCTGGCCCTGCCACCTACAAACAA			
rh.58-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
rh.40-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
hu.67-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
hu.17-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
hu.6-E	695	ATTCCGCAATGGCTGGCGACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
hu.66-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
rh.38-E	695	ATTCCACATGGCTGGCGACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
hu.32-F	692	ATTCCCATTGGCTGGGGAACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
AAV9/hu	692	ATTCCCATTGGCTGGGGAACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
hu.31-F	692	ATTCCCATTGGCTGGGGAACAGAGTCATCACCACCGAACCTGGCCCTGCCACCTACAAACAA			
			780	790	800
				810	820
					830
					840
AAV5	732	CCACCAATCAGGAGATCAAAGC---GGCTCCGTCAGGAAACGCCAACGGCTACTTTGGATA			
AAV3-3	762	CCATCTCTACAAGCAAATCTCC-----AGCCAATCAGGAGCTTCAAAAGAACCAACCACTACTTTGGCTAC			
AAV4-4-	744	CCACCTCTACAAGGGACTCGGA-----GAGAGCCTGCACTGGCCCAACACCTAACGGATT			
AAV1-A-	762	GCTCAACGGGGCAGCAACGACAAACCACTACTTCGGCTAC			
hu.46-A	762	CCACCTCTACAAGCAAATCTCCAGT---GCTCAACGGGGCAGCAACGACAAACCACTACTTCGGCTAC			
hu.48-A	762	CCACCTCTACAAGCAAATCTCCAGT---ACTTCAACGGGGCAGCAACGACAAACCACTACTTCGGCTAC			
hu.44-A	762	CCACCTCTACAAGCAAATCTCCAGT---GCTCAACGGGGCAGCAACGACAAACCACTACTTCGGCTAC			
hu.43-A	765	CCACCTCTACAAGCAAATCTCCAGT---GCTCAACGGGGCAGCAACGACAAACCACTACTTCGGCTAC			
AAV6-A	762	CCACCTCTACAAGCAAATCTCCAGT---GCTCAACGGGGCAGCAACGACAAACCACTACTTCGGCTAC			
hu.34-B	762	CCACCTCTACAAGCAAATTTC---AGCCAATCAGGAGCCCTCGAACGGACAAATCACTACTTTGGCTAC			
hu.47-B	762	CCACCTCTACAAGCAAATTTC---AGCCAATCAGGAGCCCTCGAACGGACAAATCACTACTTTGGCTAC			
hu.29-B	762	CCATCTGTACAAGCAAATTTC----AGCCAATCAGGAGCCCTCAAAACGGACAAACCACTACTTTGGCTAC			
hu.63-B	762	CCACCTCTACAAGCAGATTTC----AGCCAATCAGGAGCCCTCAAAACGGACAAACCACTACTTTGGCTAC			
hu.56-B	762	CACCTCTACAAGCAGATTTC----AGCCAATCAGGAGCCAGCAACGACAAACCACTACTTTGGCTAC			
hu.45-B	762	CACCTCTACAAGCAAATTTC----AGCCAATCAGGAGCCCTCGAACGGACAAATCACTACTTTGGCTAC			

FIG. 3AE

hu.57-B	759	CCACCTCTACAAGCAGATTCC-----AGCCAATCAGGCCAGCAATGACAAACCACTACTTTGGCTAC
hu.35-B	762	CCACCTCTACAAGCAAATTTC-----AGCCAATCAGGCCAGCAACGACAATCACTACTTTGGCTAC
hu.58-B	762	CCATCTGTACAAGCAGATTCC-----AGCCAATCAGGCCAGCAACGACAATCACTACTTTGGCTAC
hu.28-B	762	CCATCTGTACAAGCAAATATCC-----AGCCAGTCTGGAGGCCAGCAACGACAATCACTACTTTGGCTAC
hu.51-B	762	CCACCTCTACAAGCAAATTTC-----AGCCAATCAGGCCAGCTCGAAGGCCAGCAACGACAATCACTACTTTGGCTAC
hu.19-B	762	CCATCTGTACAAGCAAATCTCC-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.49-B	762	CCATCTGTACAAGCAGATCTCC-----AGCCAATCAGGCCAGCAACGACAACCACTACTTTGGCTAC
hu.52-B	762	CCACCTCTACAGCAGAAAATTTC-----AGCCAATCAGGCCAGCTCGAAGGCCAGCAACGACAATCACTACTTTGGCTAC
hu.13-B	762	CCATCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCAGCAACGACAACCACTACTTTGGCTAC
AAV2-B	762	CCACCTCTACAACAAATTTC-----AGCCAATCAGGCCAGCTCGAACGCCAGCAACGACAATCACTACTTTGGCTAC
hu.20-B	762	CCATCTGTACAAGCAAATCTCC-----AGCCAGTCTGGAGGCCAGCAACGACAACCACTACTTTGGCTAC
hu.24-B	762	CCATCTGTACAAGCAAATCTCC-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu.64-B	762	CCACCTCTACAGGCAGATTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.27-B	762	CCATCTGTACAAGCAAATCTCC-----AGCCAGTCTGGAGGCCAGCAACGACAACCACTACTTTGGCTAC
hu.21-B	762	CCATCTGTACAAGCAAATCTCC-----AGCCAGTCTGGAGGCCAGCAACGACAACCACTACTTTGGCTAC
hu.22-B	762	CCATCTGTACAAGCAAATCTCC-----AGCCAGTCTGGAGGCCAGCAACGACAACCACTACTTTGGCTAC
hu.23-B	762	CCATCTGTACAAGCAAATCTCC-----AGCCAGTCTGGAGGCCAGCAACGACAACCACTACTTTGGCTAC
hu.7-C	762	CCACCTCTACAAGCAAATCTCA-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.61-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
rh.56-C	762	CCACCTCTACAAGCAAATCTCA-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.9-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCGAACGCCAGCAACGACAACCACTACTTTGGCTGC
hu.54-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.53-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.60-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.55-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.2-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCAGCAACGACAACCACTACTTTGGCTAC
hu.1-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCAGCAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.18-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.3-C	765	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTGCAACGCCAGCAACGACAACCACTACTTTGGCTAC
hu.25-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGCCCTCAAACGCCAGCAACGACAACCACTACTTTGGCTAC

hu. 15-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu. 16-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu. 11-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu. 10-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu. 4-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAATCAGGAGCAGAACGACAACCACTACTTTGGCTAC
rh. 54-D	765	CCACCTCTACAAGCAAATCTCCCACTTCTCCAGT----CAGTCAGCAGGTAGCACCAACGACAACGTCTACTTCGGCTAC
rh. 48-D	765	CCACCTCTACAAGCAAATCTCCCACTTCTCCAGT----CAGTCAGCAGGTAGCACCAACGACAACGTCTACTTCGGCTAC
rh. 55-D	765	CCACCTCTACAAGCAAATCTCCCACTTCTCCAGT----CAGTCAGCAGGTAGCACCAACGACAACGTCTACTTCGGCTAC
rh. 62-D	765	CCACCTCTACAAGCAAATCTCCCACTTCTCCAGT----CAGTCAGCAGGTAGCACCAACGACAACGTCTACTTCGGCTAC
AAV7-D	765	CCACCTCTACAAGCAAATCTCCCACTTCTCCAGT----GAAACTGCAAGGTAGTACCAACGACAACACCTACTTCGGCTAC
rh. 52-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
rh. 51-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
hu. 39-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
rh. 53-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
hu. 37-E	765	CCACCTCTACAAGCAAATCTCCAAATGGACATGGGAGGAAGGACAACACCTACTTCGGCTAC
rh. 43-E	762	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC
rh. 50-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
rh. 49-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
rh. 61-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC
hu. 41-E	765	CCACCTCTACAAGCAAATCTCCAAATGGACATGGGAGGAAGGACAACACCTACTTCGGCTAC
rh. 64-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
hu. 42-E	765	CCACCTCTACAAGCAAATCTCCAAATGGACATGGGAGGAAGGACAACACCTACTTCGGCTAC
rh. 57-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
hu. 40-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC
AAV8-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC
rh. 58-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTTGGCTAC
rh. 40-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC
hu. 67-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC
hu. 17-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC
hu. 6-E	765	CCACCTCTACAAGCAAATCTCCAAACGGAAACGACAACACCTACTTCGGCTAC

		850	860	870	880	890	900	910
hu. 66-E	765	CCACCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCAACGACAAACACCTACTTCGGCTAC						
rh. 38-E	765	CCACCTTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCAACGACAAACACCTACTTCGGCTAC						
hu. 32-F	762	TCAACCTTACAAGCAAATCTCCAAACAGCACATCTGGAGGATCTTCAAAATGACAACGCCTACTTCGGCTAC						
AAV9/hu	762	TCAACCTTACAAGCAAATCTCCAAACAGCACATCTGGAGGATCTTCAAAATGACAACGCCTACTTCGGCTAC						
hu. 31-F	762	TCAACCTTACAAGCAAATCTCCAAACAGCACATCTGGAGGATCTTCAAAATGACAACGCCTACTTCGGCTAC						
AAV5	799	AGCACCCCCCTGGGGTACTTTGACTTTAACCGCTTCCACAGCCACTGGAGCCCCGAGACTGGCAAAAGAC						
AAV3-3-	826	AGCACCCCCCTGGGGTATTGGACTTTAACAGATTCCACTGCCACTTCAACAGGTTCACCTCACCACGTGACTTGGCAGCGAC						
AAV4-4-	799	TCCACCCCCCTGGGGTACTTTGACTTTAACAGGTTCACCTCACCACGTGACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAGCGAC						
AAV1-A-	829	AGCACCCCCCTGGGGTATTGGACTTTGATTCAACAGGTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAGCGAC						
hu. 46-A	829	AGCACCCCCCTGGGGTATTGGACTTTGATTCAACAGGTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAGCGAC						
hu. 48-A	829	GGCACCCCCCTGGGGTATTGGACTTTGATTCAACAGGTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAGCGAC						
hu. 44-A	829	AGCACCCCCCTGGGGTATTGGACTTTGATTCAACAGGTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAGCGAC						
hu. 43-A	832	AGCACCCCCCTGGGGTATTGGACTTTGATTCAACAGGTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAGCGAC						
AAV6-A	829	AGCACCCCCCTGGGGTATTGGACTTTGATTCAACAGGTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAGCGAC						
hu. 34-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 47-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 29-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 63-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 56-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 45-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 57-B	823	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 35-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 58-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 28-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 51-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 19-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						
hu. 49-B	826	AGCACCCCCCTGGGGTATTGGACTTTGACTTCACCTGCCACTTCAACAGGTTCACCTGCCACTTCAACAGGTGACTTGGCAAAAGAC						

hu.52-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.13-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
AAV2-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.20-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.24-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.64-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.27-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.21-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.22-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.23-B	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.7-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.61-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
rh.56-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.9-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.54-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.53-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.60-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.55-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.2-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.1-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.18-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.3-C	829	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.25-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.15-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.16-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.11-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.10-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
hu.4-C	826	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAAAGAC
rh.54-D	832	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAGGAC
rh.48-D	832	AGCACCCCTGGGGTATTGACTTCAACAGATTCACTGCACACTTTCACCACGTGACTGGCAGGGC

rh. 55-D	832	AGCACCCCTGGGGTATTGACCTAACAGATTCAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 62-D	832	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
AAV7-D	832	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 52-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 51-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 39-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 53-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 37-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 43-E	832	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 50-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 49-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 61-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 41-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 64-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 42-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 57-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 40-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
AAV8-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 58-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 40-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 67-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 17-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 6-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 66-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
rh. 38-E	835	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 32-F	832	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
AAV9/hu	832	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
hu. 31-F	832	AGCACCCCTGGGGTATTGACCTAACAGATTCCACTGTCACTTCAACCACGTGACTGGCAGGGC						
			920	930	940	950	960	970
								980

FIG. 3AJ

AAV5	869	TCATCAACAACTACTGGGGCTTCAAGCCCCGTTCAACATTCAAGTCAAAGTCAGGAGG
AAV3-3	896	TCATTAACAAACAACACTGGGATTCGGGATTCAGCTCAAGCTCTTCAACATCCAAAGTCAGGAGG
AAV4-4-	869	TCATCAACAAACAACACTGGGATGGCATGCCAACGCCCAGAGGACTCAACTCAAACATCCAAAGTCAGGAGG
AAV1-A-	899	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.46-A	899	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.48-A	899	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.44-A	899	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.43-A	902	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
AAV6-A	899	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.34-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.47-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.29-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.63-B	896	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.56-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.45-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAACATCCAAAGTCAGGAGG
hu.57-B	893	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACCTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.35-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.58-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.28-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.51-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAAGCTCTTAAACATCCAAAGTCAGGAGG
hu.19-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.49-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.52-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAAGCTCTTAAACATCCAAAGTCAGGAGG
hu.13-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
AAV2-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.20-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAAGCTCTTAAACATCCAAAGTCAGGAGG
hu.24-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAAGCTCTTAAACATCCAAAGTCAGGAGG
hu.64-B	896	TCATCAACAAACAACATTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG
hu.27-B	896	TCATCAACAAACAACACTGGGATTCGGGATTCAGCTCAACTCAAAGGACTCAACCTCAAAGTCAGGAGG

FIG. 3AK

hu. 21-B	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCTTACATTCAAAGTCAAAGA
hu. 22-B	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 23-B	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 7-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 61-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
rh. 56-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 9-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 54-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 53-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 60-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 55-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 2-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 1-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 18-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 3-C	899	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 25-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 15-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 16-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 11-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 10-C	896	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
hu. 4-C	896	TCGTCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
rh. 54-D	902	TCATCAACAAACAFACTGGGATTCCGGCCAAGAGACTCAGCTCAAGCTCAAGTCAAAGA
rh. 48-D	902	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGTCAAAGA
rh. 55-D	902	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGTCAAAGA
rh. 62-D	902	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGTCAAAGA
AAV7-D	902	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGTCAAAGA
rh. 52-E	905	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGCTCAAGTCAAAGA
rh. 51-E	905	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGCTCAAGTCAAAGA
hu. 39-E	905	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGCTCAAGTCAAAGA
rh. 53-E	905	TCATCAACAAACAFACTGGGATTCCGGGCCAGAGACTCAGCTCAAGCTCAAGCTCAAGTCAAAGA

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FIG. 3AM

hu. 44-A	969	GGTCACCGCAGAATGATGGCGTCACAACCATTACCGCTAAATAACCTTACCCAGCACGGGTCAAGTCTTCTCGGAC
hu. 43-A	972	GGTCACCGCAGAATGATGGCGTCACAACCATTACCGCTAAATAACCTTACCCAGCACGGGTCAAGTCTTCTCGGAC
AAV6-A	969	GGTCACCGCAGAATGATGGCGTCACAACCATTACCGCTAAATAACCTTACCCAGCACGGGTCAAGTCTTCTCGGAC
hu. 34-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 47-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 29-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 63-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 56-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 45-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 57-B	963	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 35-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 58-B	966	GGTCACCGCAGAATGATGGTTACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 28-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 51-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 19-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 49-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 52-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 13-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
AAV2-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 20-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 24-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 64-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 27-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 21-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 22-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 23-B	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 7-C	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 61-C	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
rh. 56-C	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC
hu. 9-C	966	GGTCACCGCAGAATGACGGGTACGGACGAGATGCCAATAAACCTTACCCAGCACGGGTCAAGTCTTACTGAC

hu. 54-C	966	GGTCACGGAGAATGACGGTACGACCGACGATTGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 53-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 60-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 55-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 2-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 1-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 18-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 3-C	969	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 25-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 15-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 11-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 10-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
hu. 4-C	966	GGTCACGGAGAATGACGGTACGACCGATGCCAATAACCTTACCCAGCACGGTCAGGTGTTACTGAC
rh. 54-D	972	GGTCACGGAGAATGACGGGTTACGGCATCGCTAATAACCTTACCCAGCACGGTCAGGTCTTTGGAC
rh. 48-D	972	GGTCACAAACGAATGACGGGTTACGGCATCGCTTAATAACCTTACCCAGCACGGATTCAGGTCTTTGGAC
rh. 55-D	972	GGTCACAAACGAATGACGGGTTACGGCATCGCTAATAACCTTACCCAGCACGGATTCAGGTCTTTGGAC
rh. 62-D	972	GGTCACAAACGGGTGACGGGTTACGGCATCGCTAATAACCTTACCCAGCACGGATTCAGGTCTTTGGAC
AAV7-D	972	GGTCACGACGAATGACGGGTTACGGCATCGCTAATAACCTTACCCAGCACGGATTCAGGTCTTTGGAC
rh. 52-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAAGCACCATTAGCCTACCCAGCACCATCCAGGTGTTACGGAC
rh. 51-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
hu. 39-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
rh. 53-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
hu. 37-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
rh. 43-E	972	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
rh. 50-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
rh. 49-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
rh. 61-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
hu. 41-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC
rh. 64-E	975	GGTCACGGAGAATGAGGCACCAAGACCATCGCCATAACCTCACCAGCACATCCAGGTGTTACGGAC

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FIG. 3AP

hu. 56-B	1036	TGGAGTACCGCTCCCGTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 45-B	1036	TCGGGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 57-B	1033	TGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 35-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 58-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 28-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 51-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 19-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 49-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 52-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 13-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
AAV2-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 20-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 24-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 64-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 27-B	1036	TCGGGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 21-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 22-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 23-B	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 7-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 61-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
rh. 56-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 9-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 54-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 53-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 60-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 55-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 2-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 1-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG
hu. 18-C	1036	TCGGAGTACCAAGCTCCCCTACGTCCCTCGGCTCGGCCATCAAGGATGCCTCCCGTTCCAGCAGACG

hu.3-C	1039	TCGGAGTACCAAGCTCCCGTAGTCCCCGATCAAGGATGCCCTCCCGGTTCCAGGGACG
hu.25-C	1036	TCGGAGTACCGCTCCCGTAGTCCCCGATCAAGGATGCCCTCCCGGTTCCAGGGACG
hu.15-C	1036	TCGGAGTACCGCTCCCGTAGTCCCCGATCAAGGATGCCCTCCCGGTTCCAGGGACG
hu.16-C	1036	TCGGAGTACCGCTCCCGTAGTCCCCGATCAAGGATGCCCTCCCGGTTCCAGGGACG
hu.11-C	1036	TCGGAGTACCGCTCCCGTAGTCCCCGATCAAGGATGCCCTCCCGGTTCCAGGGACG
hu.10-C	1036	TCGGAGTACCGCTCCCGTAGTCCCCGATCAAGGATGCCCTCCCGGTTCCAGGGACG
hu.4-C	1036	TCGGAGTACCAAGCTCCCGTAGTCCCCGATCAAGGATGCCCTCCCGGTTCCAGGGACG
rh.54-D	1042	TCGGAGTACCAAGCTGCCCTCGGCTCTGCCCTCCGGTCCGGCTGCCCTCCGGGGACG
rh.48-D	1042	TCGGAAATACCAAGCTGCCCTACGTCCCTCGGCTCTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.55-D	1042	TCGGAAATACCAAGCTGCCCTACGTCCCTCGGCTCGGCTTGCCCTGCCCTCCGGGGACG
rh.62-D	1042	TCGGAAATACCAAGCTGCCCTACGTCCCTCGGCTCTGCCACACCAAGGGCTGCCCTCCGGGGACG
AAV7-D	1042	TCGGAAATACCAAGCTGCCCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.52-E	1045	TCGGAAATACCAAGCTGCCCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.51-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTCTGCCCTCCGGCTGCCCTCCGGGGACG
hu.39-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTCTGCCCTCCGGCTGCCCTCCGGGGACG
rh.53-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTCTGCCCTCCGGCTGCCCTCCGGGGACG
hu.37-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.43-E	1042	TCGGAGTACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.50-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.49-E	1045	TCGGAGTACCAAGCTGCCCTCGGCTACGTCCCTCGGCTCTGCCCTCCGGGGACG
rh.61-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCCTCCGGGGACG
hu.41-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.64-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCCTCCGGGGACG
hu.42-E	1045	TCGGAGTACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.57-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
hu.40-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCCTCCGGGGACG
AAV8-E	1045	TCGGAGTACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.58-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
rh.40-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG
hu.67-E	1045	TCGGAAATACCAAGCTGCCCTCGGCTACGTCCCTCGGCTTGCCACACCAAGGGCTGCCCTCCGGGGACG

hu.17-E	1045	TCGGAATACCAGCTCCCGTACGTCCCTCGGCTCTGGCACCAGGGCTCCGGCTCCGGGGACG					
hu.6-E	1045	TCGGAATACCAGCTCCCGTACGTCCCTCGGCTCCGGCTCCGGCTGCCCTCCGGTCCCCGGGACG					
hu.66-E	1045	TCGGAATACCAGCTCCGGCTACGTCCCTCGGCTCCGGCTGCCCTCCGGTCCCCGGGACG					
rh.38-E	1045	TCGGAATACCAGCTCCGGTACGTCCCTCGGCTCCGGCTGCCCTCCGGTCCCCGGGACG					
hu.32-F	1042	TCAGACTATCAGCTCCCGTACGTGGCTCGGGCTCACGAGGGCTGCCTCCCGGCTCCAGGGACG					
AAV9/hu	1042	TCAGACTATCAGCTCCCGTACGTGGCTCGGGCTCACGAGGGCTGCCTCCCGGCTCCAGGGACG					
hu.31-F	1042	TCAGACTATCAGCTCCCGTACGTGGCTCGGGCTCACGAGGGCTGCCTCCCGGCTCCAGGGACG					
			1130	1140	1150	1160	1170
							1180
							1190
AAV5	1079	TCTTTACGGCTGCCGCCAGTAGCGAACGGCTGAACCGGAC	—	—	—	—	—
AAV3-3	1106	TCTTCATGGTCCCCCTCACTATGGATAACCTCACCCCTGAACAACCGA	—	—	—	—	—
AAV4-4	1079	TCTTTATGGTCCCCAGTAGCGAACGGCTAACCGA	—	—	—	—	—
AAV1-A	1109	TGTTCATGATTCCGGCAATACGGCTAACCGCTAACAAATGGC	—	—	—	—	—
hu.46-A	1109	TGTTCATGATTCCGGCAATACGGCTAACAAATGGC	—	—	—	—	—
hu.48-A	1109	TGTTCATGATTCCGGCAATACGGCTAACAAATGGC	—	—	—	—	—
hu.44-A	1109	TGTTCATGATTCCGGCAATACGGCTAACAAATGGC	—	—	—	—	—
hu.43-A	1112	TGTTCATGATTCCGGCAATACGGCTAACAAATGGC	—	—	—	—	—
AAV6-A	1109	TGTTCATGATTCCGGCAATACGGCTAACAAATGGC	—	—	—	—	—
hu.34-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.47-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.29-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.63-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.56-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.45-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.57-B	1103	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.35-B	1106	TCTTCATGGTACCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.58-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.28-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—
hu.51-B	1106	TCTTCATGGTGGCCACAGTAGGATAACCTCACCCCTGAACAACGGG	—	—	—	—	—

FIG. 3AS

hu.19-B	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGC-----	-AGTCAGGGGTAGGACG-----
hu.49-B	1106	TCTTCATGGATACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.52-B	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.13-B	1106	TCTTCATGGATACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
AAV2-B	1106	TCTTCATGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.20-B	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.24-B	1106	TCTTCATGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.64-B	1106	TCTTCATGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.27-B	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.21-B	1106	TCTTCATGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.22-B	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.23-B	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.7-C	1106	TCTTCATGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.61-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
rh.56-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.9-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.54-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.53-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.60-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCAGTAGGACG-----
hu.55-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.2-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.1-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.18-C	1106	TCTTTATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.3-C	1109	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.25-C	1106	TCTTCATGGTCCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.15-C	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.16-C	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.11-C	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.10-C	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----
hu.4-C	1106	TCTTCATGGGCCACAGTATGGATAACCTCACCCCTGAACAACGGG-----	-AGTCAGGCCGTAGGACG-----

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rh.54-D	1112	TCTTCATGATTCCCTCAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.48-D	1112	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.55-D	1112	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.62-D	1112	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
AAV7-D	1112	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.52-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.51-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
hu.39-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.53-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
hu.37-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.43-E	1112	TGTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.50-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.49-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
rh.61-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTGACTCTGAACAATGGC-----
hu.41-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTTACACTGAACAATGGC-----
rh.64-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTTACACTGAACAATGGC-----
hu.42-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTTACACTGAACAATGGC-----
rh.57-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTTACACTGAACAATGGC-----
hu.40-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTTACACTGAACAATGGC-----
AAV8-E	1115	TGTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
rh.58-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
rh.40-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
hu.67-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
hu.17-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
hu.6-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
hu.66-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
rh.38-E	1115	TCTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
hu.32-F	1112	TTTTCATGATTCCCCAAGTACGGCTAACCTAACACTCAACAACGGT-----
AAV9/hu	1112	TTTTCATGATTCCCCAAGTACGGGTATCTGACGGTTAATGATGGA-----
hu.31-F	1112	TTTTCATGATTCCCCAAGTACGGGTATCTGACGGTTAATGATGGA-----

		1200	1210	1220	1230	1240	1250	1260
AAV5		· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·						
AAV 3-3	1146	GAGCAGGCTTCTGGCTTAGAGTACTTTCCAGCAAGATGCTGAGAACCGGGCAACAAACTTGTGAGTTTACCC						
AAV4-4-	1167	CTCATCCCTTACTGCCTGGACTTCCCTTCGAGATGCTTAAGGACTGGAAATAACTTCCAATTTCAGG						
AAV1-A	1149	AAATGCCCTCTACTGCCCTGGACTTCCCTTCGAGATGCTGGAAACTTGAATTTCCCTTACCTTCAGG						
hu.46-A	1170	TTCATCCCTTACTGCCTGGAAATTTCCCTTACGATGCTGAGATGCTTACCTTCAGG						
hu.48-A	1170	TTCATCCCTTACTGCCTGGAAATTTCCCTTACGATGCTGAGATGCTTACCTTCAGG						
hu.44-A	1170	TTCATCCCTTACTGCCTGGAAATTTCCCTTACGATGCTGAGAAGGGCAACAAACTTACCTTCAGG						
hu.43-A	1173	TTCATCCCTTACTGCCTGGAAATTTCCCTTACGATGCTGAGAAGGGCAACAAACTTACCTTCAGG						
AAV6-A	1170	GTCATCCCTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGCAATAACTTACCTTCAGG						
hu.34-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.47-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.29-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.63-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.56-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.45-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.57-B	1164	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.35-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.58-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.28-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.51-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.19-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.49-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.52-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.13-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
AAV2-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.20-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						
hu.24-B	1167	CTCTTCATTTTACTGCCTGGACTTCCCTTCAGATGCTGAGATGCTGAGAAGGGAAACAAACTTACCTTCAGG						

FIG. 3AV

hu.. 64-B	CTCTTCATTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
hu.. 27-B	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
hu.. 21-B	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
hu.. 21-B	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
hu.. 22-B	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGACGGCTTCTGTAACCGGAAACAACCTTACCTTCAGC
hu.. 23-B	CTCTTCCTTTACTGCCCTGGAGTATTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
hu.. 7-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTACCTTCAGC
hu.. 61-C	CTCTTCATTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
rh.. 56-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
hu.. 9-C	CTCTTCATTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACCGGAAACAACCTTACCTTCAGC
hu.. 54-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 53-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 60-C	CTCTTCATTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 55-C	CTCTTCCTTTACTGCCCTGGAGTCTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 2-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 1-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 18-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 3-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 25-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 15-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 16-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 11-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 10-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
hu.. 4-C	CTCTTCCTTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACAAACTTCAATTAGC
rh.. 54-D	TCATCCCTTACTGCCCTGGAAATACTTCCCTTCTCAGGTGGTACAACGGTAACTTCACCTTCAGT
rh.. 48-D	TCCCTCTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACGGGCAACAACCTCACCTTCAGC
rh.. 55-D	TCCCTCTTACTGCCCTGGGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACGGGCAACAACCTCACCTTCAGC
rh.. 62-D	TCCCTCTTACTGCCCTGGGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACGGGCAACAACCTCACCTTCAGC
AAV7-D	TCCCTCTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACGGGCAACAACCTTCACCTTCAGC
rh.. 52-E	TCCCTCTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACGGGCAACAACCTTTCCCTTCAGC
rh.. 51-E	TCCCTCTTACTGCCCTGGAGTACTTCCCTTCTCAGATGCCCTGGGTACTGGAAACGGGCAACAACCTTTCCCTTCAGC

FIG. 3AX

hu. 46-A	1240	TACACCTTTGAGGAAGTGCCTCTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 48-A	1240	TACACCTTTGAGGAAGTGCCTTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 44-A	1240	TACACCTTTGAGGAAGTGCCTCTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 43-A	1243	TACACCTTTGAGGAAGTGCCTCTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
AAV6-A	1240	TACACCTTCGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 34-B	1237	TACACTTTGAGGAAGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 47-B	1237	TACACTTTGAGGAAGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 29-B	1237	TACACCTTGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 63-B	1237	TACACCTTGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 56-B	1237	TACACTTTGAGGAAGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 45-B	1237	TACACTTTGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 57-B	1234	TACACCTTGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 35-B	1237	TACACTTTGAGGAAGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 58-B	1237	TACACCTTGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 28-B	1237	TACACCTTGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 51-B	1237	TACACTTTGAGGAAGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 19-B	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 49-B	1237	TACACCTTGAGGACGGTGCCTTCCACAGCAGGCCACAGCCAGGGCTGGATGAA
hu. 52-B	1237	TACACTTTGAGGAAGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 13-B	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
AAV2-B	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 20-B	1237	TACACCTTGAGGAAGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 24-B	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 64-B	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 27-B	1237	TACACCTTGAGGAAGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 21-B	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 22-B	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 23-B	1237	TACACCTTGAGGAAGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 7-C	1237	TACACCTTGAGGACGGTGCCTTCCATAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA
hu. 61-C	1237	TACACCTTGAGGAAGTGCCTTCCACAGCAGGTACCGCTCACAGCCAGGGCTGGATGAA

FIG. 3AZ

FIG. 3BA

hu.29-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCAACGCCAGTC
hu.63-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCACTACGCAGTC
hu.56-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGTGGAACCCACGCCAGTC
hu.45-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGTGGAACCCACTACGCCAGTC
hu.57-B	1304	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCACTACGCCAGTC
hu.35-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGTGGAACCCACGCCAGTC
hu.58-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.28-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCAACGCCAGTC
hu.51-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGTGGAACCCACGCCAGTC
hu.19-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.49-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCAACGCCAGTC
hu.52-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGTGGAACCCACGCCAGTC
hu.13-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
AAV2-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGTGGAACCCACGCCAGTC
hu.20-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGGAACCCACGCCAGTC
hu.24-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.64-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.27-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.21-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.22-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.23-B	1307	CTCTCATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACTCCAAGGGAACCCACGCCAGTC
hu.7-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---TCAAATAGTGGAACTCTTCAGCAGTC
hu.61-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACAATAAGTGGAACTCTTCAGCAGTC
rh.56-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACAATAAGTGGAACTCTTCAGCAGTC
hu.9-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---TCAAATAGTGGAACTCTTCAGCAGTC
hu.54-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACAGCTAGTGGAACT---CAGCAGTC
hu.53-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACAGCTAGTGGAACT---CAGCAGTC
hu.60-C	1307	CTCTGGTGCACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACAATAAGTGGAACTCTTCAGCAGTC
hu.55-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACAGCTAGTGGAACT---CAGCAGTC
hu.2-C	1307	CTCTGATCGACCAGTACCTGTATTACTTGAGCAGAACAAAC---ACAATAAGTGGAACTCTTCAGCAGTC

hu.1-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAATAAGTGGAACTCTTCAGCAGTC
hu.18-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---TCAATAAGTGGAACTCTTCAGCAGTC
hu.3-C	1310	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAATAAGTGGAACTCTTCAGCAGTC
hu.25-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAATAAGTGGAACTCTTCAGCAGTC
hu.15-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---TCAATAAGTGGAACTCTTCAGCAGTC
hu.16-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---TCAATAAGTGGAACTCTTCAGCAGTC
hu.11-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---TCAATAAGTGGAACTCTTCAGCAGTC
hu.10-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---TCAATAAGTGGAACTCTTCAGCAGTC
hu.4-C	1307	CTCTGATCGACCAGTACCTGTATTATCTGAACAAGACACAA---ACAATAAGTGGAACTCTTCAGCAGTC
rh.54-D	1313	CCCTCATCGACCAGTACCTGTATTACCTGGCTAGAACAGAGTAACACAGGACACAA
rh.48-D	1313	CTCTTATCGACCAGTACCTGTATTACCTGGCCAGAACAGAGTAACACAGGACACAA
rh.55-D	1313	CTCTTATCGACCAGTACCTGTATTACCTGGCCAGAACACAGAGCAACACAGGACACAA
rh.62-D	1313	CTCTTATCGACCAGTACCTGTATTACCTGGCCAGAACACAGAGCAACACAGGACACAA
AAV7-D	1313	CCCTCATCGACCAGTACCTGTATTACCTGGCCAGAACACAGAGTAACACAGGACACAA
rh.52-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGCTAGAACACAGGACACAA
rh.51-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGCTAGAACACAGGACACAA
hu.39-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGCTAGAACACAGGACACAA
rh.53-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGCTAGAACACAGGACACAA
hu.37-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGCTAGAACACAGGACACAA
rh.43-E	1313	CTCTGATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGTACCCA
rh.50-E	1316	CTCTGATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
rh.49-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
rh.61-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
hu.41-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
rh.64-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
hu.42-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
rh.57-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
hu.40-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
AAV8-E	1316	CTCTGATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA
rh.58-E	1316	CTCTCATCGACCAGTACCTGTACTACCTGGACTCAAAACA---ACAGGAGGCACAGGGGAAACCA

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FIG. 3BD

hu.28-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.51-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.19-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.49-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.52-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.13-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
AAV2-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.20-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.24-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.64-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATCAGGACCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.27-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACGTTGGCTCCCTGGACCC
hu.21-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTGGGACCCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.22-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTGGGACCCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.23-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTGGGACCCAGTAGGAACACTGGCTCTGGCTCCCTGGACCC
hu.7-C	1374	TGGGCTACTGTTAGTCAAGCTGGACCCACCCAGCATGTCTCAAGCTAAAAAACCTGGCTACCTGGACCT
hu.61-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAACATGTCTCAAGCTAAAAAACCGGCTGGCTGGACCT
rh.56-C	1374	TGGGCTACTGTTAGTCAAGCTGGACCCACCCAGCATGTCTCAAGCTAAAAAACCTGGCTACCTGGCTCCCTGGACCT
hu.9-C	1374	TAGGCTACTGTTAGCTGGCAAGGTGGACCCACCCAGCATGTCTCAAGCTAAAAAACCTGGCTACCTGGCTCCCTGGACCT
hu.54-C	1371	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTACCTGGCTCCCTGGACCG
hu.53-C	1371	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCG
hu.60-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.55-C	1371	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCG
hu.2-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.1-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.18-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.3-C	1377	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.25-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.15-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.16-C	1374	TGGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT
hu.11-C	1374	TAGGCTACTGTTAGCTGGCAAGGTGGACCCACCAAGCATGTCTCAAGCTAAAAAACCTGGCTCCCTGGACCT

FIG. 3BF

		1480	1490	1500	1510	1520	1530	1540
AAV9/hu	1377	AACGCTAAATTCAAGTGTGGCCGGACCCAGCAACATGGCTGTCCAGGGAGAAACTACATACCTGGACCC						
hu.31-F	1377	AACGCTAAATTCAAGTGTGGCCGGACCCAGCAACATGGCTGTCCAGGGAGAAACTACATACCTGGACCC						
AAV5	1405	ATGGGCCGAACCCAGGGCTGGAACCTGGCTCCGGGGTCAAC						
AAV3-3	1447	TGCTACCGGCAACAGAGACTTTCAAAGACTGCTAACGACAAC						
AAV4-4	1429	TCAATCAAGCAGCAGGGCTTCTCAAAGACTGCCAATCAAAGATCCCTGCCACGGGTCAAGACA						
AAV1-A	1447	TGTTATCGGCAGCAGGGGTTCTAAACAAACAGACAAC						
hu.46-A	1447	TGTTATCGGCAGCAGGGGTTCTAAACAAACAGACAAC						
hu.48-A	1447	TGTTATCGGCAGCAGGGGTTCTAAACAAACAGACAAC						
hu.44-A	1447	TGTTATCGGCAGCAGGGGTTCTAAACAAACAGACAAC						
hu.43-A	1450	TGTTATCGGCAGCAGGGGTTCTAAACAAACAGACAAC						
AAV6-A	1447	TGTTACGGCCAGCAGGGGTTCTAAACAAACAGACAAC						
hu.34-B	1444	TGTTACGGCCAGCAGGGGAGTCAAGACATCTGGGATAAC						
hu.47-B	1444	TGTTACGGCCAGCAGGGGAGTCAAGACATCTGGGATAAC						
hu.29-B	1444	TGTTACGGCTCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.63-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.56-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACAGCTGGGATAAC						
hu.45-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.57-B	1441	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.35-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.58-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.28-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.51-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.19-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACAGCTGGGATAAC						
hu.49-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACAGCTGGGATAAC						
hu.52-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
hu.13-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						
AAV2-B	1444	TGTTACGGCCAGCAGGGAGTCAAGACATCTGGGATAAC						

hu. 20-B	1444	TGTTACCGCCAGCAGGAGTATCAAAGACAGCTGGGACAAC-----	AACAAACAGTGATT
hu. 24-B	1444	TGTTACCGCCAGCAGGAGTATCAAAGACAGCTGGGACAAC-----	AACAAACAGTGATT
hu. 64-B	1444	TGTTACCGCCAGCAGGAGTATCAAAGACATCTGGGATAAC-----	AACAAACAGTGATT
hu. 27-B	1444	TGTTACCGCCAGCAGGAGTATCAAAGACAGCTGGGACAAC-----	AACAAACAGTGATT
hu. 21-B	1444	TGTTACCGCCAGCAGGAGTATCAAAGACAGCTGGGACAAC-----	AACAAACAGTGATT
hu. 22-B	1444	TGTTACCGCCAGCAGGAGTATCAAAGACAGCTGGGACAAC-----	AACAAACAGTGATT
hu. 23-B	1444	TGTTACCGCCAGCAGGAGTATCAAAGACAGCTGGGACAAC-----	AACAAACAGTGATT
hu. 7-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 61-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
rh. 56-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 9-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 54-C	1441	TGTTATGCCAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 53-C	1441	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 60-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 55-C	1441	TGTTATGCCAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 2-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 1-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 18-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 3-C	1447	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 25-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 15-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 16-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 11-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 10-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
hu. 4-C	1444	TGCTACAGACAGCAGGCTGTCAAAAGCAGGAAAC-----	AACAAACAGCAA
rh. 54-D	1453	TGCTTCGGCAACAAAGAGTTCCAAAACACTGGATCAAAC-----	AACAAACAGCAA
rh. 48-D	1453	TGCTTCGGCAACAAAGAGCTCCAAAGACGGCTGGATCAAAC-----	AACAAACAGCAA
rh. 55-D	1453	TGCTTCGGCAACAAAGAGCTCCAAAGACGGCTGGATCAAAC-----	AACAAACAGCAA
rh. 62-D	1453	TGCTTCGGCAACAAAGAGCTCCAAAGACGGCTGGATCAAAC-----	AACAAACAGCAA
AAV7-D	1453	TGCTTCGGCAACAAAGAGCTCCAAAGACGGCTGGATCAAAC-----	AACAAACAGCAA

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FIG. 3BI

AAV4-4	1499	Gtctcatcaaatacgagacgcacaggcacactctggacggatggagtggccctgaccggacctccaat
AAV1-A	1502	Ttacctggactggcttcataatccatcatcaaccctggcaactgttat
hu.46-A	1502	Ttacctggactggcttcataatccatcatcaaccctggcaactgttat
hu.48-A	1502	Ttacctggactggcttcataatccatcatcaaccctggcaactgttat
hu.44-A	1502	Ttacctggactggcttcataatccatcatcaaccctggcaactgttat
hu.43-A	1505	Ttacctggactggcttcataatccatcatcaaccctggcaactgttat
AAV6-A	1502	Ttacctggactggcttcataatccatcatcaaccctggcaactgttat
hu.34-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.47-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.29-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.63-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.56-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.45-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.57-B	1496	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.35-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.58-B	1499	Actcgtggattggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.28-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.51-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.19-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.49-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.52-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.13-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
AAV2-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.20-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.24-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.64-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.27-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.21-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.22-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt
hu.23-B	1499	Actcgtggactggagctaccacccatcaatggcagagactcttggtaatccggccgcatt

hu. 7-C	1499	TTCCTGGACTGGCAGCTACAAAGTATCACCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 61-C	1499	TTCCTGGACTGGCAGCTACAAAGTATCACCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
rh. 56-C	1499	TTCCTGGACTGGCAGCTACAAAGTATCACCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 9-C	1499	TTCCTGGACTGGCAGCTACAAAGTATCACCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 54-C	1496	TTCCTGGACTGGAGCTACCAAGTACCTCAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 53-C	1496	TTCCTGGACTGGAGCTACCAAGTACCTCAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 60-C	1499	TTCCTGGACTGGAGCTACCAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 55-C	1496	TTCCTGGACTGGAGCTACCAAGTACCTCAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 2-C	1499	TTCCTGGACTGGAGCTACCAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 1-C	1499	TTCCTGGACTGGAGCTACCAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 18-C	1499	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 3-C	1502	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 25-C	1499	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 15-C	1499	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 16-C	1499	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 11-C	1499	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 10-C	1499	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
hu. 4-C	1499	TTCCTGGACTGCCGCTACAAAGTATCATCTAAATGCCGGGACTCGTTAATCCAGGACCAGCTAT
rh. 54-D	1508	TGCTTGACTGGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTAATCCTGGTGTGCCAT
rh. 48-D	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
rh. 55-D	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
rh. 62-D	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
AAV7-D	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
rh. 52-E	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
rh. 51-E	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
hu. 39-E	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
rh. 53-E	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
hu. 37-E	1508	TGCTTGACTGGTGCACCAAATTACCTAAATGCCGAGAAACTCATGGTTAATCCGGGTGTGCCAT
rh. 43-E	1505	TGCTTGACTGGTGCACCAAATTACCATCTGAACGGCAGAGACTCTGGTAAATCCTGGCATCGCTAT
rh. 50-E	1508	TGCTTGACTGGTGCACCAAATTACCATCTGAACGGCAGAGACTCTGGTAAATCCTGGCATCGCTAT

rh. 49-E	1508	TTGCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCGGTGAATCCGGGCGTCGCCAT				
rh. 61-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGCAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
hu. 41-E	1508	TTGCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCGGTGAATCCGGGCGTCGCCAT				
rh. 64-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGCAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
hu. 42-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGAAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
rh. 57-E	1508	TTGCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGAGACTCTCGGTGAATCCGGGCGTCGCCAT				
hu. 40-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGAAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
AAV8-E	1508	TTGCCTGGACTGGTGGACCTGAATGGAAAGAAATTCACTGGCTAATCCTGGCATCGCTAT				
rh. 58-E	1508	TTGCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGAGACTCTCGGTGAATCCGGGCGTCGCCAT				
rh. 40-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGAAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
hu. 67-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGAAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
hu. 17-E	1508	TTGCCTGGACCGGTGCCACCAAGTATCATCTGAATGGCAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
hu. 6-E	1508	TTGCCTGGACCGGTGCCACCAAGTATCATCTGAATGGCAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
hu. 66-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGAAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
rh. 38-E	1508	TTGCCTGGACTGGTGCACCAAAATCATCTGAACGGAAGAGAGACTCTCGGTAAATCCGGGCGTCGCCAT				
hu. 32-F	1502	TTGCCTGGCCTGGAGCTTCTTCTGGGCTCTCAATGGACGTAATAGCTTGATGAATCCTGGACCTGCTAT				
AAV9/hu	1502	TTGCCTGGCCTGGAGCTTCTTCTGGGCTCTCAATGGACGTAATAGCTTGATGAATCCTGGACCTGCTAT				
hu. 31-F	1502	TTGCCTGGCCTGGAGCTTCTTCTGGGCTCTCAATGGACGTAATAGCTTGATGAATCCTGGACCTGCTAT				
			1620	1630	1640	1650
						1660
						1670
						1680
AAV5	1530	CATGACCAACAACCTCCAGGGCAGCAACACCTATGCCCTGGAGAACACTATGATCTTCAACAGCCAGCCG				
AAV3-3	1572	GCCCAGTACAAGGACGATGAAGAAAATTTCCTATGCACGGCAATCTAAATTGGCAAAGAAGGG				
AAV4-4-	1569	GCCCACGGCTGGACACTGGGACAGCAAGTTCAAGC---AACAGCCAGCTCATCTTGGGGCCTAAACAG				
AAV1-A-	1572	GGCCTCACACAAAGACGAAAGACAAAGTCTTCCCATGAGGGGTGTATGATTGGAAAAGAGAGC				
hu. 46-A	1572	GGCCTCACACAAAGACGAAAGACAAAGTCTTCCCATGAGGGGTGTATGATTGGAAAAGAGAGC				
hu. 48-A	1572	GGCCTCACACAAAGACGAAAGACAAAGTCTTCCCATGAGGGGTGTATGATTGGAAAAGAGAGC				
hu. 44-A	1572	GGCCTCACACAAAGACGAAAGACAAAGTCTTCCCATGAGGGGTGTATGATTGGAAAAGAGAGC				
hu. 43-A	1575	GGCCTCACACAAAGACGAAAGACAAAGTCTTCCCATGAGGGGTGTATGATTGGAAAAGAGAGC				
AAV6-A	1572	GGCCTCACACAAAGACGAAAGACAAAGTCTTCCCATGAGGGGTGTATGATTGGAAAAGAGAGC				

hu. 34-B	1569	GGCAAGCCACAAGGACAATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 47-B	1569	GGCAAGCCACAAGGACAATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 29-B	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 63-B	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 56-B	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 45-B	1569	GGCAAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 57-B	1566	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 35-B	1569	GGCAAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 58-B	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGGA
hu. 28-B	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 51-B	1569	GGCAAGCCACAAGGACAATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 19-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 49-B	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 52-B	1569	GGCAAGCCACAAGGACAATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 13-B	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
AAV2-B	1569	GGCAAGCCACAAGGACGATGAAGAAAAGTTTCCCTCAGAGGGGGTCTCATCTTGGAAAGCAAGGC
hu. 20-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGAC
hu. 24-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGAC
hu. 64-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGAC
hu. 27-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGAC
hu. 21-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGAC
hu. 22-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGAC
hu. 23-B	1569	GGCCAGCCACAAGGACGATGAAGAAAATATTTCCTCAGAGGGGGTCTCATCTTGGAAAACAAAGAC
hu. 7-C	1569	GGCCAGTCACAAGGACGATGAAGAAAAGTTTCCCCATGCATGGAACCCCTTATTTGGTAAACAAAGGA
hu. 61-C	1569	GGCCAGTCACAAGGACGATGAAGAAAAGTTTCCCCATGCATGGAACCCCTAATATTGGTAAACAAAGGA
rh. 56-C	1569	GGCCAGTCACAAGGACGATGAAGAAAAGTTTCCCCATGCATGGAACCCCTGATATTGGTAAACAAAGGA
hu. 9-C	1569	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCCATGCATGGAACCCCTGATATTGGTAAACAAAGGA
hu. 54-C	1566	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCCATGCATGGAACCCCTAATATTGGTAAACAAAGGA
hu. 53-C	1566	GGCCAGCCACAAGGACGATGAAGAAAAGTTTCCCCATGCATGGAACCCCTAATATTGGTAAACAAAGGA
hu. 60-C	1569	GGCCAGTCACAAGGATGACCAAGAAAAGTTTCCCCATGCATGGAACCCCTAATATTGGTAAACAAAGGA

hu.55-C	1566	GGCCAGCCACAAGGACCGATGAAGAAAAGTTTCCCCCATGCATGGAACCCATAATTGGTAAGAAGGA
hu.2-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.1-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.18-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.3-C	1572	GGCCAGTCACAAGGATGACGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.25-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.15-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.16-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.11-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.10-C	1569	GGCCAGCCACAAGACGATGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
hu.4-C	1569	GGCCAGTCACAAGGATGACGAAGAAAAGTTTCCCCCATGCATGGAACCCCTGATATTGGTAACAAAGGA
rh.54-D	1578	GGCAACTACAAGCACAAAGGACGGAGCTTCTCCAGGGAGTCTGTGATTTGGAAAAACTGGAA
rh.48-D	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGAGTCTGTGATTTGGAAAAACTGGAA
rh.55-D	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGAGTCTGTGATTTGGAAAAACTGGAA
rh.62-D	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGAGTCTGTGATTTGGAAAAACTGGAA
AAV7-D	1578	GGCAACTACAAGGACGGAGCTTCTCCAGGGAGTCTGTGATTTGGAAAAACTGGAA
rh.52-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.51-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
hu.39-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.53-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
hu.37-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.43-E	1575	GGCAACACACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.50-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.49-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.61-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
hu.41-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.64-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
hu.42-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
rh.57-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA
hu.40-E	1578	GGCAACCACAAGGACGGAGCTTCTCCAGGGCATCCTCATGTTGGCAAGGAGGGAA

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AAV8-E	1578	GGCAACACACAAAGAACGACGAGGAGCGTTCCTCCAGTAACGGGATCCTGATTGCAAACAAAAT				
rh. 58-E	1578	GGCAACCAACAAGGACGACGAGGAGCGCTTCCCATCCAGGGCATCCTCATGAGGGAAACAGGGT				
rh. 40-E	1578	GGCAACGCATAAGGACGACGAGGAGCGAACGTTCTCCCATGAGGGAAACAGGGT				
hu. 67-E	1578	GGCAACCCACAAGGACGACGAGGAGCGTTCTCCGTGAGTGGAGCCTGATGTTGGAAAACAGGGT				
hu. 17-E	1578	GGCAACGGCACAAAGGACGACGAGGAGCGATTTCATCCAGGGAGTCTTGGAAAACAGGGA				
hu. 6-E	1578	GGCAACGGCACAAAGGACGACGAGGAGCGATTTCATCCAGGGAGTCTTGGAAAACAGGGA				
hu. 66-E	1578	GGCAACCCCACAAGGACGACGAGGAGCGTTCTCCGTGAGTGGAGCCTGATGTTGGAAAACAGGGT				
rh. 38-E	1578	GGCAACCCCACAAGGACGACGAGGAGCGTTCTCCGTGAGTGGAGCCTGATGTTGGAAAACAGGGT				
hu. 32-F	1572	GGCCAGGCCACAAGGAAGGGAGGGACCCTTGGATCTTTGCTGGATCTTAATTGGCAAACAAAGGA				
AAV9/hu	1572	GGCCAGGCCACAAGGAAGGGAGGGACCCTTGGATCTTTGCTGGATCTTAATTGGCAAACAAAGGA				
hu. 31-F	1572	GGCCAGGCCACAAGGAAGGGAGGGACCCTTGGATCTTTGCTGGATCTTAATTGGCAAACAAAGGA				
			1690	1700	1710	1720
AAV5			1600	GCGAACCCGGCACCCACGTACCGTACGGCAACATGGCTCATACCGGAGGGAGACGCAGC		
AAV3-3	1642	ACA-----ACGGCAAGTAACGCCAACATTAGAT---AATGTAATGATACGGATGAAAGAGAGATTGCTGA				
AAV4-4-	1636	AAC-----GGCAACACGGCACCGTACCCGGG---ACTCTGATCTCACCTCTGAGGAGCTGGCAG				
AAV1-A-	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC---AATGTCATGATACAGACGAAGGGAAATTAAAG				
hu. 46-A	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC---AATGTCATGATACAGACGAAGGGAAATTAAAG				
hu. 48-A	1642	GCC-----GGAGCTTCAAGCAGTGCATTGGAC---AATGTCATGATACAGACGAAGGGAAATTAAAG				
hu. 44-A	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC---AATGTCATGATACAGACGAAGGGAAATTAAAG				
hu. 43-A	1645	GCC-----GGAGCTTCAAAACACTGCATTGGAC---AATGTCATGATACAGACGAAGGGAAATTAAAG				
AAV6-A	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC---AATGTCATGATACAGACGAAGGGAAATTAAAG				
hu. 34-B	1639	TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCTGATTACAGACGAAGGGAAATTCAAGGA				
hu. 47-B	1639	TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCTGATTACAGACGAAGGGAAATTCAAGGA				
hu. 29-B	1639	CCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCTGATTACAGACGAAGGGAAATTCAAGGA				
hu. 63-B	1639	TCG-----GGAAAAAAACTAAATGTGGACATTGAA---AAGGTCTGATTACAGACGAAGGGAAATTCAAGGA				
hu. 56-B	1639	TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCTGATTACAGACGAAGGGAAATTCAAGGA				
hu. 45-B	1639	TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCTGATTACAGACGAAGGGAAATTCAAGGA				
hu. 57-B	1636	TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCTGATTACAGACGAAGGGAAATTCAAGGA				

FIG. 3BO

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hu.35-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 hu.58-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 hu.28-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 hu.51-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 hu.19-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.49-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 hu.52-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 hu.13-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 AAV2-B 1639 TCA-----GAGAAAACAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAATCAGGA
 hu.20-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.24-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.64-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.27-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.21-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.22-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.23-B 1639 TCG-----GGAAAACACTAATGTGGACATTGAA---AAGGTTATGATTACAGACGAAGAGGAATCAGGA
 hu.7-C 1639 ACA-----AATGCTAACGACGCCGATTGGAC---AATGTCATGATTACAGATGAAGAGGAATCCGCA
 hu.61-C 1639 ACA-----AATGCCAACGACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGA
 rh.56-C 1639 ACA-----AATGCTAACGACGCCGATTGGAC---AATGTCATGATTACAGATGAAGAGGAATCCGCA
 hu.9-C 1639 ACA-----AATGCTAACGACGCCGATTGGAC---CATGTTATGATTACAGATGAAGAGGAATCAGGA
 hu.54-C 1636 ACA-----AATGCTACCAACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGA
 hu.53-C 1636 ACA-----AATGCTACCAACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGA
 hu.60-C 1639 ACA-----AATGCCAACGACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGA
 hu.55-C 1636 ACA-----AATGCTACCAACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGA
 hu.2-C 1639 ACA-----AATGCCAACGACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGG
 hu.1-C 1639 ACA-----AATGCCAACGACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGG
 hu.18-C 1639 ACA-----AATGCCAACGACGCCGATTGGAC---AATGTCATGATTACAGATGAAGAGGAATCCGCA
 hu.3-C 1642 ACA-----AATGCCAACGACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGC
 hu.25-C 1639 ACA-----AATGCCAACGACGCCGATTGGAA---AATGTCATGATTACAGATGAAGAGGAATCAGGA
 hu.15-C 1639 ACA-----AATGCCAACGACGCCGATTGGAC---AATGTCATGATTACAGATGAAGAGGAATCCGCA

hu.16-C	1639	ACA	-----AATGCTAACCGACCGGGATTGGAC---AATGTCATGATTACAGATGAAGAGAAATCCGCA
hu.11-C	1639	ACA	-----AATGCTAACCGACCGGGATTGGAG---CATGTTATGATTACAGATGAAGAGAAATCAGGA
hu.10-C	1639	ACA	-----AATGCTAACCGACCGGGATTGGAG---CATGTTATGATTACAGATGAAGAGAAATCAGGA
hu.4-C	1639	ACA	-----AATGCCAACGACCGGGATTGGAA---AATGTCATGATTACAGATGAAGAGAAATCAGGG
rh.54-D	1648	GCA	-----ACCAAC---AAGACTACATTGAA---AACGTTTAATGACAAATGAAGAGAAATTCGTC
rh.48-D	1648	GCA	-----GCTAAT---AAGACTACACTGGAA---AATGTTTAATGACAAATGAAGAGAAATTCGTC
rh.55-D	1648	GCA	-----GCTAAT---AAGACTACACTGGAA---AATGTTTAATGACAAATGAAGAGAAATTCGTC
rh.62-D	1648	GCA	-----GCTAAT---AAGACTACACTGGAA---AATGTTTAATGACAAATGAAGAGAAATTCGTC
AAV7-D	1648	GCA	-----ACTAAC---AAAACATGGAA---AATGTTTAATGACAAATGAAGAGAAATTCGTC
rh.52-E	1648	GCT	-----GGAAAGACAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
rh.51-E	1648	GCT	-----GGAAAGACAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
hu.39-E	1648	GCT	-----GGAAAGACAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
rh.53-E	1648	GCT	-----GGAAAGACAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
hu.37-E	1648	GCT	-----GGAAAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCGCGAGGAAGAAATTAAAA
rh.43-E	1642	GCT	-----GCCAGAGACAATGGGATTACAGC---GATGTCATGCTAACCGCGAGGAAGAAATCAAGA
rh.50-E	1648	GCT	-----GGAAAGACAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
rh.49-E	1648	GCT	-----GGAAAGACAAACATGGGCTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
rh.61-E	1648	GCT	-----GGAAAGACAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
hu.41-E	1648	GCT	-----GGAAAGACAAATGTGGACTACAGC---AGCGTTATGCTAACCGCGAGGAAGAAATCAAGA
rh.64-E	1648	GCT	-----GGAAAGACAAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
hu.42-E	1648	GCT	-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCGCGAGGAAGAAATCAAGA
rh.57-E	1648	GCT	-----GGAAAGAGACAATGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
hu.40-E	1648	GCT	-----GGAAAGAGACAATGTGGACTATAAGC---AGCGTTATGCTAACCGCGAGGAAGAAATCAAGA
AAV8-E	1648	GCT	-----GCCAGAGACAATGGGATTACAGC---GATGTCATGCTAACCGCGAGGAAGAAATCAAGA
rh.58-E	1648	GCT	-----GGAAAGAGACAACGTGGACTATAAGC---AACGTGATGCTAACCGCGAGGAAGAAATCAAGA
rh.40-E	1648	GCT	-----GGAAAGAGACAATGTGGACTATAAGC---AGCGTTATGCTAACCGCGAGGAAGAAATCAAGA
hu.67-E	1648	GCT	-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCGCGAGGAAGAAATCAAGA
hu.17-E	1648	GCT	-----GGAAAGAGACAACGTGGACTATAAGC---AGCGTTATGCTAACCGAGGAAGAAATCAAGA
hu.6-E	1648	GCT	-----GGAAAGAGACAACGTGGACTATAAGC---AGCGTTATGCTAACCGAGGAAGAAATCAAGA
hu.66-E	1648	GCT	-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCGAGGAAGAAATCAAGA

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hu.13-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTACGGAGGCTACGGAGCAGTATGGGTCTGTATCTACCAACCTGCAGGGGGCAACACACAAGC
AAV2-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTATGGGTCTACCAACCTCCAGAGGGCAACAGACAAGC
hu.20-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGGCTACGGAGCAGTATGGGTCTGTATCTACCAACCTCCAGAGGGCAACACAAGC
hu.24-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGGCTACGGAGCAGTATGGGTCTGTATCTACCAACCTCCAGAGGGCAACACAAGC
hu.64-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTATGGGTCTACCAACCTCCAGAGGGCAACACAAGC
hu.27-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTATGGGTCTACCAACCTCCAGAGGGCAACACAAGC
hu.21-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTATGGGTCTACCAACCTCCAGAGGGCAACACAAGC
hu.22-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTATGGGTCTGTATCTGTATCTACCAACCTCCAGAGGGCAACACAAGC
hu.23-B	1700	CAACCAAATCCCCTGGCTACGGAGCAGTATGGGTCTACCTCACCAACCTCCAGAGGGCAACACAAGC
hu.7-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGCAGTATGGGTCTACGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.61-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGCAGTACGGATATTGTCAAATAATTGCAAACACTCAAACACTGGTCC
rh.56-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGATATTGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.9-C	1700	CAACCAAATCCCCTGGCTACAGAGCAGTACGGAGCAGTACGGAGAAGCTGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.54-C	1697	CAACCAAATCCCCTGGCTACAGAGCAGTACGGAGTATGTGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.53-C	1697	CAACCAAATCCCCTGGCTACAGAGCAGTACGGAGTATGTGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.60-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGCAGTACGGAGAACTGTATCAAATAATTGCAAACACTCAAACACTGGTCC
hu.55-C	1697	CAACCAAATCCCCTGGCTACAGAGCAGTACGGAGTATGTGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.2-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGTATGTGTCAAATAATTGCAAACACTCAAACACTGGTCC
hu.1-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGCAGTACGGAGACTGTGTCAAATAATTGCAAACACTCAAACACTGGTCC
hu.18-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGTATGTGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.3-C	1703	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGCAGTACGGAGACTGTGTCAAATAATTGCAAACACTCAAACACTGGTCC
hu.25-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGCAGTACGGAGACTGTGTCAAATAATTGCAAACACTCAAACACTGGTCC
hu.15-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGTATGTGTCAAATAATTGCAAACACTCAAATAACTGGTCC
hu.16-C	1700	CAACCAAATCCCCTGGCTACGGAGCAGTACGGAGCAGTACGGAGACTGTGTCAAATAATTGCAAACACTCAAACACTGGTCC
hu.11-C	1700	CAACCAAATCCCCTGGCTACAGAGCAGTACGGAGAATAACGGGATAGTCAGCAGCAATTACAAGGGCAACACTCAAACACTGGTCC
hu.10-C	1700	CAACCAAATCCCCTGGCTACAGAGCAGTACGGAGTACGGAGAATAACGGGATAGTCAGCAGCAATTACAAGGGCAACACTCAAACACTGGTCC
hu.4-C	1700	CAACCAAATCCCCTGGCTACAGAGCAGTACGGAGCAGTACGGAGAATAACGGGATAGTCAGCAGCAATTACAAGGGCAACACTCAAACACTGGTCC
rh.54-D	1706	CTACTAATCCCCTGGCCACAGAAGATAACGGGATAGTCAGCAGCAATTACAAGGGCAACACTCAAACACTGCAGC
rh.48-D	1706	CTACCAACCCGGTAGGCCACCGAGGAATAACGGGACTGTAGCAGCAACCTGCAGGGCTAACACTGCAGC
rh.55-D	1706	CTACCAACCCGGTAGGCCACCGAGGAATAACGGGACTGTAGCAGCAACCTGCAGGGCTAACACTGCAGC

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AAV 5	1740	CGCGACCGGCACGGTACAACCTCCAGGAATCGTGCCGGCAGCGTGGATGGAGAGGGACCGTGTACCTC
AAV 3 - 3	1773	ACCGACTGGAACACTCATCACGGGGCCTTACCTGGCATGGGCAAGATCGTGCATGGCTGGCAAGATTTACTAC
AAV 4 - 4 -	1767	GACCGTGGACAGACTGACAGCCATTGGAGATGTGCATGGCTATGGAGCATGGCAAGATAGAGACATTACTAC
AAV 1 - A	1773	TGGGACCCGGAGATGGCATGGCTATGGAGCATGGCAAGATACCTGGCATGGCAAGATAGAGACCTGTACCTG
hu. 46 - A	1773	TGGGACCCGGAGATGGCATGGCTATGGAGCATGGCAAGATACCTGGCATGGCAAGATAGAGACCTGTACCTG
hu. 48 - A	1773	TGGGACCCGGAGATGGCATGGCTATGGAGCATGGCAAGATAGAGACCTGTACCTG
hu. 44 - A	1773	TGGGACCCGGAGATGGCATGGCTATGGAGCATGGCAAGATAGAGACCTGTACCTG
hu. 43 - A	1776	TGGGACCCGGAGATGGCATGGCTATGGAGCATGGCAAGATAAGAGACCTGTACCTG
AAV 6 - A	1773	TGGGACCCGGAGATGGCATGGCTTACCTGGGAATGGCTGGCATGGCAAGACAGAGACAGAGATGGTACCTG
hu. 34 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGATGGTACCTG
hu. 47 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 29 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 63 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 56 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 45 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 57 - B	1767	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 35 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 58 - B	1770	ATCTACTCCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 28 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 51 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 19 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 49 - B	1770	AGCTACTCCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
AAV2 - B	1770	AGCTACCCGAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 20 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 24 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 64 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 27 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG
hu. 21 - B	1770	AGCTACCTCAGATGTCAACACACAAAGCGTTCTCCAGGCATGGCTGGCAGGACAGAGACAGCTGTACCTG

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hu.22-B	1770	AGCTACCTCAGATGTCAACACACAAGGCGTCTTCAGGCATGGCTGGCAGGCCAGAGACGCTGTACCTG
hu.23-B	1770	AGCTACCTCAGATGTCAATCACCAAGGAGCCATTACCTGGCATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.7-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGCATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.61-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGCATGGTGGCAGGATCGAGAACGCTGTACCTG
rh.56-C	1770	AACTACTGGAAACTGTCAATCACCGAGGGAGCCATTACCTGGCATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.9-C	1770	AACTACTGGAAACTGTCAATCACCGAGGGAGCCATTACCTGGCATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.54-C	1767	AAGTACTGAAACTGTGAATCACCAAGGAGCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.53-C	1767	AAGTACTGAAACTGTGAATCACCAAGGAGCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.60-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.55-C	1767	AACTACTGGAAACTGTCAATCACCAAGGAGCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.2-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.1-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.18-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.3-C	1773	AACTACAGGAACCTGCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.25-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.15-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.16-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.11-C	1770	AACTACAGAAAATGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.10-C	1770	AACTACAGAAAATGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
hu.4-C	1770	AACTACTGGAAACTGTCAATCACCAAGGAGCCATTACCTGGATGGTGGCAGGATCGAGAACGCTGTACCTG
rh.54-D	1776	CCAGACACAAAGTTGTCAACAAACCAGGGAGCCATTACCTGGCATGGTGGTGGCAGAACCGGGACGCTGTACCTG
rh.48-D	1776	CCAGACACAAAGTTGTCAACAAACCAGGGAGCCATTACCTGGCATGGTGGTGGCAGAACCGGGACGCTGTACCTG
rh.55-D	1776	CCAGACACAAAGTTGTCAACAAACCAGGGAGCCATTACCTGGCATGGTGGTGGCAGAACCGGGACGCTGTACCTG
rh.62-D	1776	CCAGACACAAAGTTGTCAACAAACCAGGGAGCCATTACCTGGCATGGTGGTGGCAGAACCGGGACGCTGTACCTG
AAV7-D	1776	CCAGACACAAAGTTGTCAACAAACCAGGGAGCCATTACCTGGCATGGTGGTGGCAGAACCGGGACGCTGTACCTG
rh.52-E	1779	TATTGTGGGGCCCTAACAGCCAGGGAGCCATTACCTGGCATGGTCTGGCAGAACCGGGACGCTGTACCTG
rh.51-E	1779	TATTGTGGGGCCCTAACAGCCAGGGAGCCATTACCTGGCATGGTCTGGCAGAACCGGGACGCTGTACCTG
hu.39-E	1779	TACTGTGGGGCCCTAACAGCCAGGGAGCCATTACCTGGCATGGTCTGGCAGAACCGGGACGCTGTACCTG
rh.53-E	1779	TATTGTGGGGCCCTAACAGCCAGGGAGCCATTACCTGGCATGGTCTGGCAGAACCGGGACGCTGTACCTG
hu.37-E	1779	TATTGTGGAAATGTCAACAGCCAAAGGAGCCATTACCTGGCATGGTCTGGCAGAACCGGGACGCTGTACCTG

			1900	1910	1920	1930	1940	1950	1960
rh. 43-E	1773	TCAAATTGGAACTGTCAACAGCCAGGGGCCCTTACCCGGATATGGTCTGGCAGAACCGGGACCGTGTACCTG							
rh. 50-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGGCCCTTACCTGGCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
rh. 49-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGGCCCTTACCTGGCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
rh. 61-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGGCCCTTACCTGGCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
hu. 41-E	1779	TATTGTGGAAATGTCAACAGCCAGGGGCCCTTACCTGGCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
rh. 64-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGGCCCTTACCTGGCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
hu. 42-E	1779	TATTGTGGAAATGTCAACAGCCAGGGGCCCTTACCTGGCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
rh. 57-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGGCCCTTACCTGGCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
hu. 40-E	1779	TATTGTGGAAATGTCAACAGCCAGGGGCCCTTACCTGGCATGGCTCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
AAV8-E	1779	TCAAATTGGAAACTGTCAACAGCCAGGGGCCCTTACCCGGATATGGTCTGGCAGAACCGGGACCGTGTACCTG							
rh. 58-E	1779	TATTGTGGGGCCGTCAACAGCCAGGGGCCCTTACCTGGCATGGCTCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
rh. 40-E	1779	TATTGTGGAAATGTCAACAGCCAGGGGCCCTTACCTGGCATGGCTCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
hu. 67-E	1779	TATTGTGGAAATGTCAACAGCCAAAGGGGCCCTTACCTGGCATGGCTCATGGTCTGGCATGGCTCATGGTCTGGCATGGCTG							
hu. 17-E	1779	TATTGTAGGGCCGTCAACAGTCAGGAGGCCCTTACCTGGCATGGCTCAACAGTCAGGAGGCCCTTACCTGGCATGGCTCATGGTCTGGCATGGCTG							
hu. 6-E	1779	TATTGTAGGGCCGTCAACAGTCAGGAGGCCCTTACCTGGCATGGCTCAACAGTCAGGAGGCCCTTACCTGGCATGGCTCATGGTCTGGCATGGCTG							
hu. 66-E	1779	TATTGTGGAAATGTCAACAGCCAAAGGGGCCCTTACCTGGCATGGCTCAACAGTCAGGAGGCCCTTACCTGGCATGGCTCATGGTCTGGCATGGCTG							
rh. 38-E	1779	TATTGTGGAAATGTCAACAGCCAAAGGGGCCCTTACCTGGCATGGCTCAACAGCAAAATTCTCCGGGTATGGTTGGCAGGACAGAGATGTGTACCTG							
hu. 32-F	1773	GCAGACCGGGCTGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTGGCAGGACAGAGATGTGTACCTG							
AAV9/hu	1773	GCAGACCGGGCTGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTGGCAGGACAGAGATGTGTACCTG							
hu. 31-F	1773	GCAGACCGGGCTGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTGGCAGGACAGAGATGTGTACCTG							
AAV5	1810	CAAGGACCCATCTGGCCAAAGATCCAGAGACGGGGGCACATTTCACCCCTCTCCGGCATGGGGAT							
AAV3-3	1843	CAAGGACCTATCTGGCCAAAGATTCTCACACGGATGGACACTTTCACCCCTCATCCTCTCATGGGGCT							
AAV4-4-	1837	CAGGGTCCCCATTGGCCAAAGATTCTCACACAGATGGACACTTACCCGATGGACACTTACCCCTCACACAGATGGACACTTACCCGCTCTCATGGGGCT							
AAV1-A-	1843	CAGGGTCCCCATTGGCCAAAAATTCTCACACAGATGGACACTTACCCGCTCTCACACAGATGGACACTTACCCGCTCTCATGGGGCT							
hu. 46-A	1843	CAGGGTCCCCATTGGCCAAAAATTCTCACACAGATGGACACTTACCCGCTCTCACACAGATGGACACTTACCCGCTCTCATGGGGCT							
hu. 48-A	1843	CAGGGTCCCCATTGGCCAAAAATTCTCACACAGATGGACACTTACCCGCTCTCACACAGATGGACACTTACCCGCTCTCATGGGGCT							
hu. 44-A	1843	CAGGGTCCCCATTGGCCAAAAATTCTCACACAGATGGACACTTACCCGCTCTCATGGGGCT							

hu.43-A	1846	CAGGGTCCCCATTGGGCCAAAATTGGCCATTATGGGCAACACAGATGGACACTTCACACAGATGGGCGGT
AAV6-A	1843	CAGGGTCCCTATTGGCCAAAATTGGCCATTTCACACGGATGGACACTTCACCCGTCTCCTCATGGGGGT
hu.34-B	1840	CAGGGGCCATCTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGTGGAT
hu.47-B	1840	CAGGGGCCATCTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGTGGAT
hu.29-B	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.63-B	1840	CAGGGGCCATCTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.56-B	1840	CAGGGGCCATCTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.45-B	1840	CAGGGGCCATCTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.57-B	1837	CAGGGGCCATCTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.35-B	1840	CAGGGGCCATCTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.58-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.28-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.51-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.19-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.49-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.52-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.13-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
AAV2-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.20-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.24-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.64-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.27-B	1840	CAGGGGCCATTGGCAAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.21-B	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.22-B	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.23-B	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGACATTTCACCCCTTCCCTCATGGGCGGAT
hu.7-C	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGATGGACACTTCACCCCTTCCACTGATGGGAGGT
hu.61-C	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGATGGACACTTCACCCCTTCCACTGATGGGAGGT
rh.56-C	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGATGGACACTTCACCCCTTCCACTGATGGGAGGT
hu.9-C	1840	CAGGGGCCATTGGCAAAGATTCCACACACGGACACTTCACCCCTTCCACTGATGGGAGGT
hu.54-C	1837	CGGGGACCCATTGGCCAAGATTCCACACGGATGGGAGGT

hu.53-C	1837	CAGGGACCCATTGGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
hu.60-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
hu.55-C	1837	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
hu.2-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
hu.1-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
hu.18-C	1840	CAGGGACCCATTGGCCAAGATTCCACACGGACGGGCACTTCACTCCATTAATGGGAGGTT
hu.3-C	1843	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
hu.25-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
hu.15-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTTATGGGAGGTT
hu.16-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTTATGGGAGGTT
hu.11-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCACCCGAGGGACACTTCACCCCTTCACTGATGGGAGGTT
hu.10-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCACCCGAGGGACACTTCACCCCTTCACTGATGGGAGGTT
hu.4-C	1840	CAGGGACCCATTGGCCAAGATTCCACACCGATGGACACTTCATCCTTCCACTGATGGGAGGTT
rh.54-D	1846	CAGGGTCCCATTGGCCAAATTCCATCTGGCCCATCTGGCCATTGGCCAAAGATTCCACACAGGGCAACATTCAACCGGTCTCCGGCTGATGGGGGCT
rh.48-D	1846	CAGGGTCCCATTGGCCCATCTGGCCATTGGCCAAACTTCACACGGACGGCAACATTCAACCCGTTCCCGCTGATGGGGGCT
rh.55-D	1846	CAGGGTCCCATTGGCCATTGGCCAAAGATTCCACACGGACGGCAACATTCAACCCGTTCCCGCTGATGGGGGCT
rh.62-D	1846	CAGGGTCCCATTGGCCATTGGCCAAAGATTCCACACGGATGGCAAACTTCACACGGATGGCGATGGGGGCT
AAV7-D	1846	CAGGGTCCCATTGGCCATTGGCCAAAGATTCCACACGGATGGCAAACTTCACACGGATGGCGATGGGGGCT
rh.52-E	1849	CAGGGTCTCTATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
rh.51-E	1849	CAGGGTCTCTATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
hu.39-E	1849	CAGGGTCTCTATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
rh.53-E	1849	CAGGGTCTCTATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
hu.37-E	1849	CAGGGTCCCATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
rh.43-E	1843	CAGGGTCCCATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
rh.50-E	1849	CAGGGTCTCTATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
rh.49-E	1849	CAGGGTCTCTATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
rh.61-E	1849	CAGGGTCCCATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
hu.41-E	1849	CAGGGTCCCATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
rh.64-E	1849	CAGGGTCTCTATTGGCCAAAGATTCCACACAGATGGCAAACTTCACACAGATGGCGATGGGGGCT
hu.42-E	1849	CAGGGTCCCATTGGCCAAAGATTCCACACAGGGCAAACTTCACACAGGGCAACTTCACCCGCTATGGGAGAC

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		rh..57-E	1849	CAGGGTTCCTATTGGCCCAAGATTGGCTCACACAGATGGCAACTTCCACCGGCTCCTTAATGGGGGCT	hu..40-E	1849	CAGGGTCCCATGGGCCAAGATTCCACCGGCAACTTCCACCCCTAACCGCTAACCGGTGATGGGGGCT	AAV8-E	1849	CAGGGTCCCATGGCCCAAGATTCCACCGGCAACTTCCACCCGTTAACCGGTGATGGGGGCT	rh..58-E	1849	CAGGGTCCATTGGCCCAAGATTCCACAGATGGCAACTTCCACCCGTTAACCGGTGATGGGGGCT	rh..40-E	1849	CAGGGTCCCATGGCCCAAAATTCCACCGGACGGCAATTTCACCCGTTAACCGGTGATGGGGGCT	hu..67-E	1849	CAGGGTCCCATGGCCCAAGATTCCACCGGACGGCAACTTCCACCCCTAACCGGTGATGGGGGCT	hu..17-E	1849	CAGGGTCCATTGGCCCAAGATTCCACACGGACGGCAACTTCCACCCGTTAACCGGTGATGGGGGCT	hu..6-E	1849	CAGGGTCCATTGGCCCAAGATTCCACCGGACGGCAACTTCCACCCGTTAACCGGTGATGGGGGCT	hu..66-E	1849	CAGGGTCCCATGGCCCAAGATTCCACCGGACGGCAACTTCCACCCCTAACCGGTGATGGGGGCT	rh..38-E	1849	CAGGGTCCCATGGCCCAAGATTCCACCGGACGGCAACTTCCACCCCTAACCGGTGATGGGGGCT	hu..32-F	1843	CAAGGACCCATTGGCCAAATTCCCTCACACGGACGGCAACTTCCACCCCTTCACCGGTGATGGGGGCT	AAV9/hu	1843	CAAGGACCCATTGGCCAAATTCCCTCACACGGACGGCAACTTCCACCCCTTCACCGGTGATGGGGGCT	hu..31-F	1843	CAAGGACCCATTGGCCAAATTCCCTCACACGGACGGCAACTTCCACCCCTTCACCGGTGATGGGGGCT
			1970	1980	1990		2000		2010		2020		2030																											
AAV5																																								
AAV3-3																																								
AAV4-4	-																																							
AAV1-A	-																																							
hu..46-A	1913	TTGGACTCAAGAACCCGGCTCCCTCAGATCCCTCATCAAATCTGAAATCTGGCAACTCCGACGAC	hu..48-A	1913	TTGGACTCAAGAACCCGGCTCCCTCAGATCCCTCATCAAATCTGAAATCTGGCAACTCCGACGAC	hu..44-A	1913	TTGGACTCAAGAACCCGGCTCCCTCAGATCCCTCATCAAATCTGAAATCTGGCAACTCCGACGAC	hu..43-A	1913	TTGGACTCAAGAACCCGGCTCCCTCAGATCCCTCATCAAATCTGAAATCTGGCAACTCCGACGAC	AAV6-A	1913	TTGGACTTAAGAACCCGGCTCCCTCAGATCCCTCATCAAATCTGAAATCTGGCAACTCCGACGAC	hu..34-B	1910	TCGGACTTAACACCCCTCCTCCACAGATTCTCATCAAAGAACCCCCGGTACCTGGAAATCTGACCAAC	hu..47-B	1910	TCGGACTTAACACCCCTCCTCCACAGATTCTCATCAAAGAACCCCCGGTACCTGGAAATCTGACCAAC	hu..29-B	1910	TCGGACTTAACACCCCTCCTCCACAGATTCTCATCAAAGAACCCCCGGTACCTGGAAATCTGACCAAC	hu..63-B	1910	TCGGACTTAACACCCCTCCTCCACAGATTCTCATCAAAGAACCCCCGGTACCTGGAAATCTGACCAAC	hu..56-B	1910	TCGGACTTAACACCCCTCCTCCACAGATTCTCATCAAAGAACCCCCGGTACCTGGAAATCTGACCAAC											

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hu.45-B	1910	TCGGACTTAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.57-B	1907	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.35-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.58-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.28-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.51-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.19-B	1910	TGGACTAAACACCCCTCCACAAATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.49-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.52-B	1910	TGGACCTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.13-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
AAV2-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.20-B	1910	TGGACTAAACACCCCTCCACAAATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.24-B	1910	TGGACTAAACACCCCTCCACAAATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.64-B	1910	TGGACTAAACACCCCTCCACAGATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACTAC
hu.27-B	1910	TGGACTAAACACCCCTCCACAAATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.21-B	1910	TGGACTAAACACCCCTCCACAAATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.22-B	1910	TGGACTAAACACCCCTCCACAAATTCTCATCAAGAACACCCCCGGTACCTGCGAATCCTTCGACCAC
hu.23-B	1910	TGGGCTAAACACCCGGCTCCAGATCATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.7-C	1910	TGGGCTAAACACCCGGCTCCAGATCATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.61-C	1910	TGGACTAAACACCCACCTCCTCAAATCATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
rh.56-C	1910	TGGGCTAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.9-C	1910	TGGGACTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.54-C	1907	TGGGACTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.53-C	1907	TGGGACTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.60-C	1910	TGGGACTCAAACACCCACCTCCTCAAATCATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.55-C	1907	TGGGACTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.2-C	1910	TGGGACTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.1-C	1910	TGGGACTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.18-C	1910	TGGGCTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA
hu.3-C	1913	TGGGACTCAAACACCCGGCTCCAGATTATGATCAAAAACACTCCGGTCCAGCCAATCTCCCACAAA

hu.25-C	1910	TGGACTAACACCCGCCCTCAGATTGATCAAAACACTCCCAGTCCAGCCAAATCCTCCTACAAA
hu.15-C	1910	TGGACTAACACCCACCTCCTCAGATCATGATTAAACACTCCCAGTCCAGCCAAATCCTCCCCACAAA
hu.16-C	1910	TGGACTAACACCCACCTCCTCAGATCATGATTAAACACTCCCAGTCCAGCCAAATCCTCCCCACAAA
hu.11-C	1910	TGGACTAACACCCGCCCTCCTCAAATCATGATCAAACACTCCCAGTCCAGCCAAATCCTCCCCACAAA
hu.10-C	1910	TGGACTAACACCCGCCCTCCTCAAATCATGATCAAACACTCCCAGTCCAGCCAAATCCTCCCCACAAA
hu.4-C	1910	TGGACTAACACCCGCCCTCCTCAAATCATGATCAAACACTCCCAGTCCAGCCAAATCCTCCCCACAAA
rh.54-D	1916	TGGACTGAAGCATCGGCCCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
rh.48-D	1916	TGGACTGAAGCATCGGCCCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
rh.55-D	1916	TGGACTGAAGCATCGGCCCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
rh.62-D	1916	TGGACTGAAGCATCGGCCCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
AAV7-D	1916	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
rh.52-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
rh.51-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
hu.39-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
rh.53-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACTCCCAGTCCAGCTAATCCCCGGAGGT
hu.37-E	1919	TGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACAC
rh.43-E	1913	TGGCTGAACATCCGGCTCAGATCCTGATCAAACACGGCGCTGACCTGGGATCCTCCGGACAC
rh.50-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACAGC
rh.49-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACAGC
rh.61-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACAGC
hu.41-E	1919	TGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAACACGGCGCTGACCTGGGATCCTCCAAACAGC
rh.64-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACAGC
hu.42-E	1919	TGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAACACGGCGCTGACCTGGGATCCTCCGGACAC
rh.57-E	1919	TGGACTAAACATCCGGCTCCTCAGATCCTGATCAAACACGGCGCTGACCTGGGATCCTCCAAACAGC
hu.40-E	1919	TGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACAGC
AAV8-E	1919	TGGCTGAACATCCGGCTCAGATCCTGATCAAACACGGCGCTGACCTGGGATCCTCCGGACAC
rh.58-E	1919	TGGACTAAACATCCGGCTCAGATCCTGATCAAACACGGCGCTGACCTGGGATCCTCCAAACAGC
rh.40-E	1919	TGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACAGC
hu.67-E	1919	TGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAACACGGCGGTACCTGGGATCCTCCAAACGAC
hu.17-E	1919	TGGACTGAACACGGCGGTACCTGGGATCCTCCAAACTAC

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		2040	2050	2060	2070	2080	2090	2100
hu. 6-E	1919	TGGGACTGAAACACCCGCCCTCCTCAGATCAGATTAGAATAACACCTGTTCCCGGGATCCTCCAACTAC						
hu. 66-E	1919	TGGGACTGAAAGCACCCACCTCCCTCAGATCAGATTAGAACAAGGCCGGTACCTGCGGATCTCCAAACAAAC						
rh. 38-E	1919	TGGGACTGAAAGCACCCACCTCCCTCAGATCCTGATCAAGAACCGCCGGTACCTGCGGATCTCCAAACAAAC						
hu. 32-F	1913	TGGGAATGAAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTCCAAACGGG						
AAV9/hu	1913	TGGGAATGAAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTCCAAACGGG						
hu. 31-F	1913	TGGGAATGAAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTCCAAACGGG						
AAV5	1947	CTTCAGCCCCAAAGTTGCTCATTTCAGCCAGCTTCACTACCCAGTACAGGCACCCGGCAGGTACCCGGATGGAG						
AAV3-3	1983	CTTCAGCTCTACTCCGGTAACCTCCCTCATTACTCAGTCATTCCATCACC						
AAV4-4-	1977	CTTCAGCTCTACTCCGGTAACCTCCCTCATTACTCAGTCATTCCATCACC						
AAV1-A-	1983	GTTTTAGCTACAAAGTTGCTCATTCACTACCCAAATACTCCCTCATTCCATCACC						
hu. 46-A	1983	GTTTTAGCTACAAAGTTGCTCATTCACTACCCAAATACTCCCTCATTCCATCACC						
hu. 48-A	1983	GTTTTAGCTACAAAGTTGCTCATTCACTACCCAAATACTCCCTCATTCCATCACC						
hu. 44-A	1983	GTTTTAGCTACAAAGTTGCTCATTCACTACCCAAATACTCCCTCATTCCATCACC						
hu. 43-A	1986	GTTTTAGCTACAAAGTTGCTCATTCACTACCCAAATACTCCACAGGACAAGTGA						
AAV6-A	1983	GTTTTAGCTACAAAGTTGCTCATTCACTACCCAAATACTCCACAGGACAAGTGA						
hu. 34-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 47-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 29-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 63-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 56-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 45-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 57-B	1977	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 35-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 58-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 28-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 51-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						
hu. 19-B	1980	CTTCAGTGGCAAAAGTTGCTCCCTCATCACAGTACTCCACAGGACAGGTCA						

hu.49-B	1980	CTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTATTCCACAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.52-B	1980	CTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.13-B	1980	CTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
AAV2-B	1980	CTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.20-B	1980	TTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.24-B	1980	TTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.64-B	1980	CTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.27-B	1980	TTTCAGTGGCAAAGTTGTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.21-B	1980	TTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.22-B	1980	TTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.23-B	1980	TTTCAGTGGCAAAGTTGCTTCCCTCATCACACAGTACTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.7-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.61-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
rh.56-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.9-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.54-C	1977	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.53-C	1977	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.60-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.55-C	1977	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.2-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.1-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.18-C	1980	CTTCAGTGTGCCAAGTTGCTTCCCTCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.3-C	1983	CTTCAGTGTGCCAAGTTGCTTCCATCACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.25-C	1980	CTTCAGTGTGCCAAGTTGCTTCCATCACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.15-C	1980	CTTCAGTGTGCCAAGTTGCTTCCATCACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.16-C	1980	CTTCAGTGTGCCAAGTTGCTTCCATCACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.11-C	1980	CTTCAGTGTGCCAAGTTGCTTCCATCACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.10-C	1980	CTACAGTGTGCCAAGTTGCTTCCATCACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
hu.4-C	1980	CTTCAGTGTGCCAAGTTGCTTCCATCACACAGTATTCCACAGTCAAGGTCAAGGCCAGGTCAAGCGTGGAGATCGAG
rh.54-D	1986	GTTTACGCCCTGCCAAGTTGCTTCCATCACAGTACACAGTCAAGGCCAGGTCAAGCGTGGAGATCGAG

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	2110	2120	2130	2140	2150	2160	2170
AAV5	2017	TGGGAGCTCAAGAAGGAAACTCCAAGAGGGTGGAACCCAGAGATCCAGTACACAACAACTACAACGACC					
AAV3-3	2053	TGGGAGCTACAGAAAGAACAGCCTGGAAACCGCTGGAAATCCAGAGATTCACTTCCAACTACAACAAAGT					
AAV4-4	2047	TGGGAGATCCAGAAGGGGGTCCAAACGCTGGAAACGGTCCAGTTACCTCCAACTACAACAACTACAACAGC					
AAV1-A	2053	TGGGAGCTGCAGAAAGAACAGCCTGGAAACAGCCTGGAAATCCGAAGTGCAGTACACATCCAATTATGCCAAAT					
hu.46-A	2053	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACATCCAATTATGCCAAAT					
hu.48-A	2053	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACATCCAATTATGCCAAAT					
hu.44-A	2053	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACATCCAATTATGCCAAAT					
hu.43-A	2056	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACATCCAATTATGCCAAAT					
AAV6-A	2053	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.34-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.47-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.29-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.63-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.56-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.45-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.57-B	2047	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.35-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.58-B	2050	TGGGAGCTACAGAAAGGAAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.28-B	2050	TGGGAGCTGCAGAAAGGAAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.51-B	2050	TGGGAGCTGCAGAAAGAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.19-B	2050	TGGGAGCTGCAGAAAGGAAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
AAV2-B	2050	TGGGAGCTGCAGAAAGGAAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.20-B	2050	TGGGAGCTGCAGAAAGGAAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.24-B	2050	TGGGAGCTGCAGAAAGGAAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					
hu.64-B	2050	TGGGAGCTGCAGAAAGGAAACAGCCTGGAAATCCGAAGTGCAGTACACTTCAAATTATGCCAAAT					

FIG. 3CF

hu.27-B	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.21-B	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.22-B	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.23-B	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.7-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.61-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
rh.56-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.9-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGGAGATCCAGTATACT
hu.54-C	2047	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.53-C	2047	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.60-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.55-C	2047	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.2-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.1-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.18-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.3-C	2053	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.25-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.15-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.16-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.11-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.10-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
hu.4-C	2050	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCGAAATTCAACTTCAACT
rh.54-D	2056	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC
rh.48-D	2056	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC
rh.55-D	2056	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC
rh.62-D	2056	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC
AAV7-D	2056	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC
rh.52-E	2059	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC
rh.51-E	2059	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC
hu.39-E	2059	TGGGAGGCTGCAGAAGGAGAACAGC AAACGCTGGAATCCCAATTGACAAC

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rh. 53-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGAACCCAGAGATTCAACTTCCAACCTACAAT							
hu. 37-E	2059	TGGGAGCTACAGAAAGGAAAACAGCAAAGGGCTGGAACCCGGAGATCCAGTACACCTCCAACCTACAAT							
rh. 43-E	2053	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGAGGCCAGAGATTCAAGTATACTTCCAACCTACAAT							
rh. 50-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGAGGCCAGAGATTCAAGTACAAT							
rh. 49-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
rh. 61-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 41-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
rh. 64-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 42-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
rh. 57-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 40-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGGAACCCAGAGATTCAAGTACAAT							
AAV8-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGGAACCCAGAGATTCAAGTACAAT							
rh. 58-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
rh. 40-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 67-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 17-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAAGGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 6-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 66-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGGAACCCAGAGATTCAAGTACAAT							
rh. 38-E	2059	TGGGAGCTGCAGAAGGAGAACAGCAAACGGCTGGGAACCCAGAGATTCAAGTACAAT							
hu. 32-F	2053	TGGGAGCTGCAGAAGGAAACAGCAAAGGGCTGGGAACCCGGAGATCCAGTACACTTCCAACATTACAGT							
AAV9/hu	2053	TGGGAGCTGCAGAAGGAAACAGCAAAGGGCTGGGAACCCGGAGATCCAGTACACTTCCAACATTACAGT							
hu. 31-F	2053	TGGGAGCTGCAGAAGGAAACAGCAAAGGGCTGGGAACCCGGAGATCCAGTACACTTCCAACATTACAGT							
			2180	2190	2200	2210	2220	2230	2240
AAV5	2087	CCCAGTTTGTGGACTTTGCCCGGACAGCAGGCCGGAAATACAGAACCCAGACCTATCGGAACCCGATA							
AAV3-3	2123	CTGTTAATGTGGACTTTACTGTAGACACTAATGGTGTATAGTGAACCTCGCCCTATTGGAACCCGGTA							
AAV4-4-	2117	AAAACCTCTGTGGCTGGGAATAACACTGAGCCTAGGGCTATCGGTACCCGCTA							
AAV1-A-	2123	CTGCCAACGTTGATTTACTGTGGACAAACATGGACTTTACTGAGCCTGCCCATGGCACCCGTTA							
hu. 46-A	2123	CTGCCAACGTTGATTTACTGTGGACAAACATGGACTTTACTGAGCCTGCCCATGGCACCCGTTA							

FIG. 3CH

hu.48-A	2123	CTGCCAACCGTTGATTACTGTGGACAAACATGGACCTTACTGAGCCTTGCCCATGGCACCCGTTA
hu.44-A	2123	CTGCCAACCGTTGATTACTGTGGACAAACATGGACCTTACTGAGCCTTGCCCATGGCACCCGTTA
hu.43-A	2126	CTGCCAACCGTTGATTACTGTGGACAAACATGGACCTTACTGAGCCTTGCCCATGGCACCCGTTA
AAV6-A	2123	CTGCCAACCGTTGATTCACTGTGGACAAACATGGACCTTACTGAGCCTTGCCCATGGCACCCGTTA
hu.34-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGCGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.47-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGCGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.29-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGCGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.63-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGCGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.56-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGCGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.45-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGCGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.57-B	2117	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.35-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.58-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.28-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.51-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.19-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.49-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.52-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.13-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
AAV2-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.20-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.24-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.64-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.27-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.21-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.22-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.23-B	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.7-C	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
hu.61-C	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA
rh.56-C	2120	CTGTTAATGTGGGACTTTACTGTGGACACTAATGGGGGTATTAGAGCCTCGGCCCATGGCACCCGATA

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hu. 9-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 54-C	2117	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 53-C	2117	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 60-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 55-C	2117	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 2-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 1-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 18-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 3-C	2123	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 25-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 15-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 16-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 11-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 10-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
hu. 4-C	2120	CTGTTAATGTGGACTTACTGTGGACACTAACTGTGGCTTACTGAGGCCTTGGCCCATGGCACCAAGATA
rh. 54-D	2126	AGACTGGGTGGACCTTGCGGTGACAGGCCAGGGTGTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
rh. 48-D	2126	AGACTGGGTGGACCTTGCGGTGACAGGCCAGGGTGTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
rh. 55-D	2126	AGACTGGGTGGACCTTGCGGTGACAGGCCAGGGTGTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
rh. 62-D	2126	AGACTGGGTGGACCTTGCGGTGACAGGCCAGGGTGTATTCTGAGCCTCGCCCCATTGGTACTCGTTA
AAV7-D	2126	AGACTGGGTGGACCTTGCGGTGACAGGCCAGGGTGTATTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
rh. 52-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
rh. 51-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
hu. 39-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
rh. 53-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
hu. 37-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
rh. 43-E	2123	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
rh. 50-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
rh. 49-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
rh. 61-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA
hu. 41-E	2129	CTACAAATGTGGACTTTGGCTTAATACTGAGGGGTGTTACTCTGAGCCTCGCCCCATTGGCAGCTCGTTA

rh. 64-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
hu. 42-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
rh. 57-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
hu. 40-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
AAV8-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
rh. 58-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
rh. 40-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
hu. 67-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
hu. 17-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
hu. 6-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
hu. 66-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGTTA		
rh. 38-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTACTCTGAGCCTCGCCCCATTGGCACTCGCTA		
hu. 32-F	2123	CTAATAATGTTGAATTGCTGTTAATACTGAAGGGTGTATATACTGAACCCGGCCCCATTGGCACCAAGATA		
AAV9/hu	2123	CTAATAATGTTGAATTGCTGTTAATACTGAAGGGTGTATATACTGAACCCGGCCCCATTGGCACCAAGATA		
hu. 31-F	2123	CTAATAATGTTGAATTGCTGTTAATACTGAAGGGTGTATATACTGAACCCGGCCCCATTGGCACCAAGATA		
			2250 .	2260
			· · · · · · · · · · · ·	
AAV5	2157	CCTTACCCGACCCCTT-----		
AAV3-3-	2193	TCTCACACGAAACTTG-----		
AAV4-4-	2187	CCTCACCCACCACCTGTAA-----		
AAV1-A-	2193	CCTTACCCGTCCTGTAA-----		
hu. 46-A	2193	CCTTACCCGTCCTGTAA-----		
hu. 48-A	2193	CCTTACCCGTCCTGTAA-----		
hu. 44-A	2193	CCTTACCCGTCCTGTAA-----		
hu. 43-A	2196	CCTTACCCGTCCTGTAA-----		
AAV6-A	2193	CCTCACCCGTCCTGTAA-----		
hu. 34-B	2190	CCTGACTCGTAATCTGTAA-----		
hu. 47-B	2190	CCTGACTCGTAATCTGTAA-----		
hu. 29-B	2190	CCTGACTCGTAATCTGTAA-----		

hu.63-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.56-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.45-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.57-B	2187	CCTGACTCTCGTAATCTGTAA-
hu.35-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.58-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.28-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.51-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.19-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.49-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.52-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.13-B	2190	CCTGACTCTCGTAATCTGTAA-
AAV2-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.20-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.24-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.64-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.27-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.21-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.22-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.23-B	2190	CCTGACTCTCGTAATCTGTAA-
hu.7-C	2190	CCTGACTCTCGTAATCTGTAA-
hu.61-C	2190	CCTGACTCTCGTAATCTGTAA-
rh.56-C	2190	CCTGACTCTCGTAATCTGTAA-
hu.9-C	2190	CCTGACTCTCGTAATCTGTAA-
hu.54-C	2187	CCTGACTCTCGTAATCTGTAA-
hu.53-C	2187	CCTGACTCTCGTAATCTGTAA-
hu.60-C	2190	CCTGACTCTCGTAATCTGTAA-
hu.55-C	2187	CCTGACTCTCGTAATCTGTAA-
hu.2-C	2190	CCTGACTCTCGTAATCTGTAA-
hu.1-C	2190	CCTGACTCTCGTAATCTGTAA-

hu.18-C	2190	CCCGACTCGTAATCTGTAA-
hu.3-C	2193	CCTGACTCTGTAATCTGTAA-
hu.25-C	2190	CCTGACTCGTAATCTGTAA-
hu.15-C	2190	CCTGACTCGTAATCTGTAA-
hu.16-C	2190	CCTGACTCTGTAATCTGTAA-
hu.11-C	2190	CCTGACTCGTAATCTGTAA-
hu.10-C	2190	CCTGACTCGTAATCTGTAA-
hu.4-C	2190	CCTGACTCTGTAATCTGTAA-
rh.54-D	2196	CCTCACCCGTAATCTGTAA-
rh.48-D	2196	CCTCACCCGTAATCTGTAA-
rh.55-D	2196	CCTCACCCGTAATCTGTAA-
rh.62-D	2196	CCTCACCCGTAATCTGTAA-
AAV7-D	2196	CCTCACCCGTAATCTGTAA-
rh.52-E	2199	CCTCACCCGTAATCTGTAA-
rh.51-E	2199	CCTCACCCGTAATCTGTAA-
hu.39-E	2199	CCTCACCCGTAATCTGTAA-
rh.53-E	2199	CCCCACCCGTAATCTGTAA-
hu.37-E	2199	CCTCACCCGTAATCTGTAA-
rh.43-E	2193	CCTCACCCGTAATCTGTAA-
rh.50-E	2199	CCTCACCCGTAATCTGTAA-
rh.49-E	2199	CCTCACCCGTAATCTGTAA-
rh.61-E	2199	CCTCACCCGTAATCTGTAA-
hu.41-E	2199	CCTCACCCGTAATCTGTAA-
rh.64-E	2199	CCTCACCCGTAATCTGTAA-
hu.42-E	2199	CCTCACCCGTAATCTGTAA-
AAV8-E	2199	CCTCACCCGTAATCTGTAA-
rh.58-E	2199	CCTCACCCGTAATCTGTAA-
rh.40-E	2199	TCTGACACGTAAATCTGTAA-

hu.67-E 2199 CCTCACCCGTAATCTGTAA-
hu.17-E 2199 CCTGACTCGTAATCTGTAA-
hu.6-E 2199 CCTCACCCGTAACCTGTAA-
hu.66-E 2199 CCTCACCCGTAATCTGTAA-
rh.38-E 2199 CCTCACCCGTAATCTGTAA-
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hu.31-F 2193 CCTGACTCGTAATCTGTAA-

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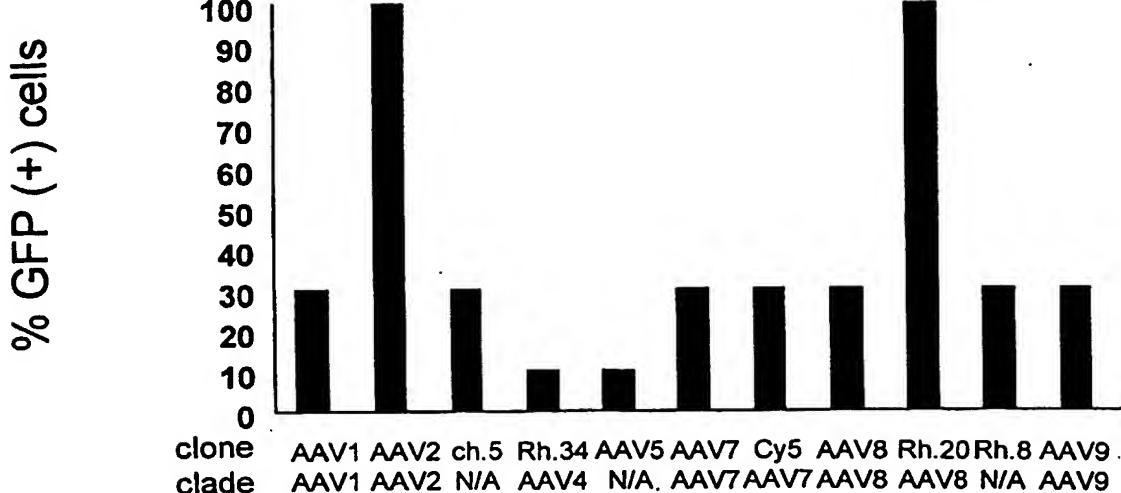


Fig. 4A

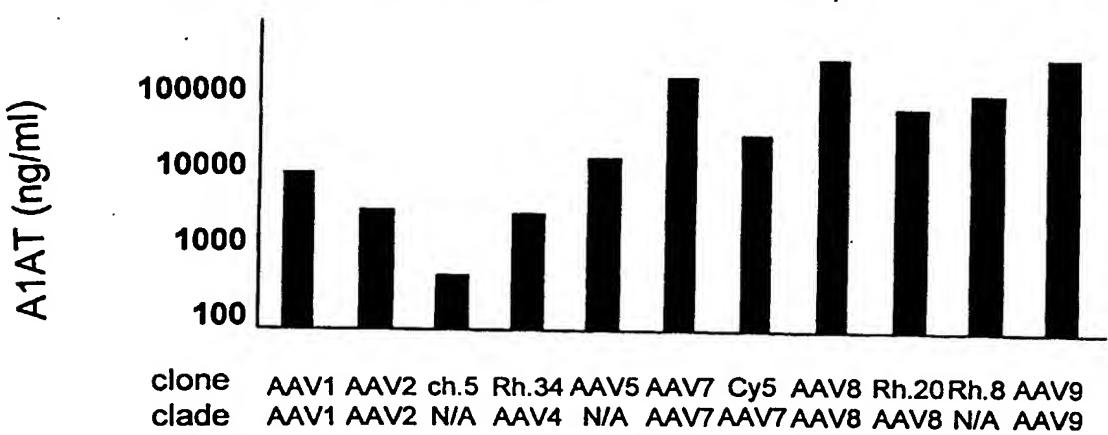
In Vitro

Fig. 4B

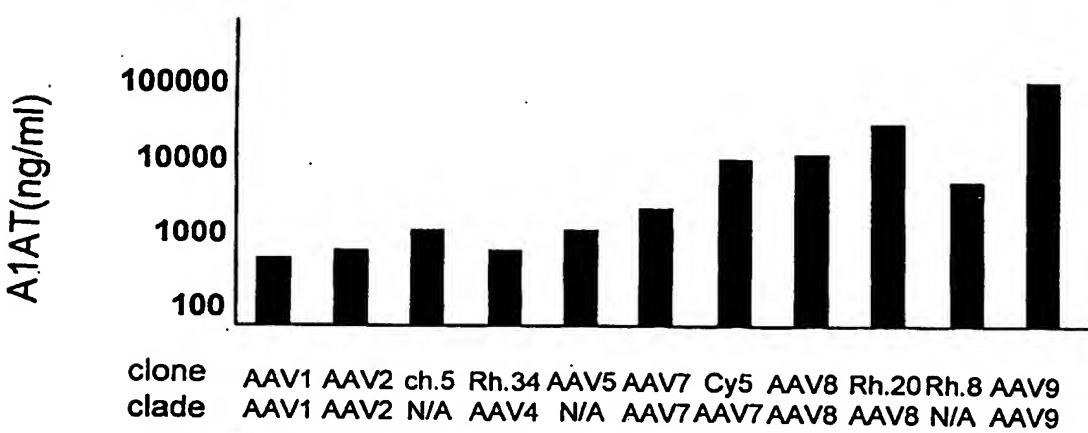
Liver

Fig. 4C

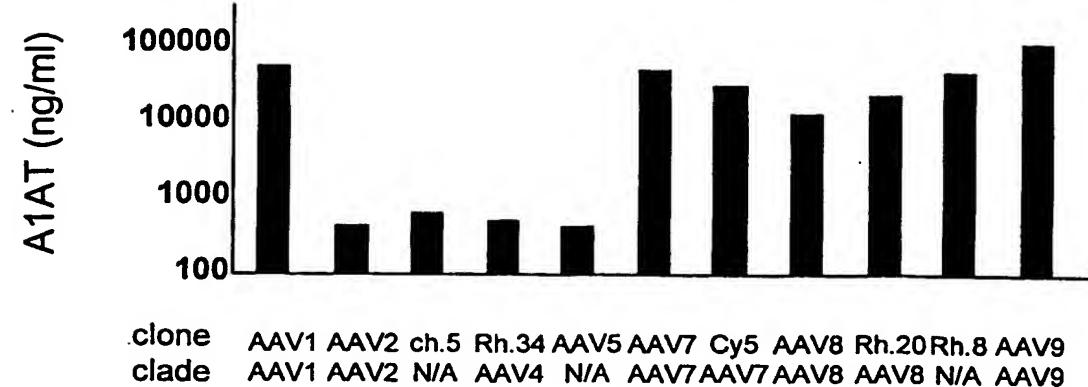
Lung

Fig. 4D

Muscle

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